THE ROLE OF THE CASEWORKER IN THE REINTEGRATION PROCESS

Research into the effect of optimal caseworker-welfare recipient match on reemployment rates in Rotterdam

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ABSTRACT

In order to keep the Dutch welfare system affordable, the municipalities should aim for their reintegration process of welfare recipients to paid labor to be efficient. There is no uniform one-size-fits-all reintegration program; researchers are divided about the optimal method for caseworkers to shape this process, and caseworkers are currently relying on their instinct and experience. Previous studies have demonstrated that the shaping of the reintegration process currently is too dependent on the caseworker's personal style, and too little on the welfare recipients' characteristics. Specifically, these studies have suggested that there is heterogeneity among caseworkers in their effectiveness in having the welfare recipients flow out of the welfare system, both in general and for specific welfare recipient characteristics. Welfare recipients are currently allocated randomly to caseworkers, and if caseworkers are indeed more or less effective with some welfare recipient profiles than with others, random allocation seems suboptimal. This study examines whether this heterogeneity in caseworker effectiveness is present in Rotterdam as well, using data from the municipality of Rotterdam on the welfare recipients that have entered their welfare system in 2014 or 2015. Besides general caseworker effectiveness, specific effectiveness in terms of gender, age and welfare recipients with psychological limitations have been analyzed as well. Results indicate that about 10-15% of the caseworkers are significantly different in their effectiveness than the mean, and around 9% of all caseworkers in the sample are significantly more or less effective with females, older people or with welfare recipients with psychological limitations. These findings suggest that there are possible efficiency gains in the reintegration process, if the welfare recipients' personal characteristics are being considered in the allocation of welfare recipients among caseworkers.

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1. INTRODUCTION

Since 2015, the participation law has been effective in the Netherlands, which has induced a shift from being a welfare state to a society focused on participation. It is no longer self-evident that each Dutch citizen is entitled to a welfare benefit. Rather, they have the right to apply for such a benefit. The rationale behind this shift is, according to the municipality of Rotterdam (Gemeente Rotterdam, 2015a), that it is in everyone's interest to motivate these welfare recipients to find a paid job as soon as possible, so they are no longer dependent on the Dutch society for funding. This way, the government can temper the welfare cost increase, and the welfare recipients feel more involved in society. (Gemeente Rotterdam, 2015a). In order to incentivize this reintegration into the labor market, the Netherlands has reserved money for active labor market policies, which should reduce the welfare recipients' distance to the labor market. The Netherlands has the highest spending on these active labor market policies of all OECD countries, even though its unemployment rate of 6.3% is below the average (Trading Economics, 2016; Gautier & van der Klaauw, 2009). Since there is a high regional autonomy in the Netherlands, the municipalities may choose how they spend their share of the budget. In Rotterdam, welfare recipients are randomly assigned to a caseworker who is employed by the municipality. Since there is no uniform reintegration path for the welfare recipients, caseworkers look at each case individually and personalize their approach. This caseworker has significant power over the welfare recipient's reintegration path: he decides what programs are suitable for this welfare recipient, the stringency of the job search and job acceptance obligations, and can impose benefit cuts upon violation of the rules. Since the caseworkers have significant freedom in their work, their styles and primary choice reintegration program can be very divergent. As suggested by Huber et al. (2014), caseworkers may differ significantly in their working style, since there is no uniform reintegration path and they rely on their instinct and experience. There is variation in their personal communication style, which could be more on cooperative or controlling in their use of sanctions and exemptions, in reintegration program assignment, and in their focus on either the counseling or monitoring component of their job (2Doc, 2015).

Research has indicated that welfare recipients have heterogeneous profiles, and respond differently to the variety of caseworker styles. Hence, the effectiveness of caseworkers in guiding the welfare recipients to a paid job differs heavily (Lagerstrom, 2011). Throughout this article, the term effectiveness will refer to the reemployment rate: the probability of outflow out of the welfare system, into paid work.

Thus far, there is little agreement about the most effective caseworker style. Several studies investigated the differences in effectiveness between the two main components of the caseworker's job: counseling and monitoring; a social worker on the one hand, and the policeman on the other. Some studies reported that the caseworker is most effective if he focuses on counseling (Card et al., 2009; European Commission, 2012; Pederson et al., 2012; Rosholm, 2014; Rosholm & Svarer, 2010; Schütz et al., 2011), whereas other research conclude that the caseworkers should focus on monitoring (Behncke et al., 2010a; McVicar, 2008). Yet other studies suggest that the caseworkers should focus on counseling merely

under specific circumstances (Broderson et al., 2014; Fougère et al., 2009; Gorter & Kalb, 1996; Kluve, 2006; Lalive et al., 2005; Rosholm, 2014). Similarly, another debated question concerns the caseworker's attitude; should he be cooperation-oriented, or tough towards his clients? (Behncke et al., 2010a; Huber et al., 2014; Johnson and Klepinger, 1994; Lalive et al., 2005; Schütz et al., 2011).

The inconsistency between these studies could be present because they generally consider solely the average treatment effect of the caseworker, rather than specifying and distinguishing different groups of welfare recipient profiles. It is possible that some caseworkers have a higher success rate with some types of welfare recipients than others because their personal style is more suitable for that particular profile. Behncke et al (2010b), however, propose a different explanation. They analyzed welfare data from Denmark and concluded that similarity between caseworker and welfare recipient increases caseworker effectiveness. Specifically, these researchers show that if the caseworker and his client have the same gender, nationality and educational level, the reemployment rate increases by around 4 percentage points.

Other studies compared caseworker effectiveness if they based their decision on their gut feeling, when welfare recipients were randomly allocated to the reintegration, and when they were allocated according to a statistical approach, conditional on the welfare recipients' characteristics (Frölich, 2001). It was demonstrated that caseworker's gut feelings were about as effective as random assignment. Using statistical analysis for an optimal allocation of welfare recipients across reintegration programs, however, raised the reemployment rate by 10 percentage points. Hence, his study suggests that a caseworker's gut feelings are not an optimal method of allocation, that the welfare recipient's profile determines in part how effective a reintegration program is, and that effectiveness increases significantly if one considers welfare recipients' characteristics. This view is supported by Manski (2000a, 2000b).

Together, this literature suggests that there is still room for improvement, both in understanding the optimal caseworker style, and how to optimally consider the welfare recipients' characteristics in shaping their reintegration path and allocating them among caseworkers.

In this article, the difference in effectiveness between caseworkers in the municipality of Rotterdam is explored by analyzing data as provided by the municipality of Rotterdam. Specifically, the aim of this research is to examine whether the municipality – which is currently randomly assigning their welfare recipients to caseworkers – could improve their reemployment rate if they optimally allocate welfare recipients among caseworkers.
The main research question is therefore:
- Is there heterogeneity in effectiveness among caseworker in the municipality of Rotterdam?

Additionally, this paper will explore three sub questions concerning possible moderators of the caseworker effectiveness, in order to approach the main research question for specific welfare recipient characteristics.

- Is there heterogeneity among caseworkers in effectiveness with female welfare recipients?
- Is there heterogeneity among caseworkers in effectiveness with older welfare recipients?
- Is there heterogeneity among caseworkers in effectiveness with psychological limitations?

The remainder of this thesis is structured as follows. Chapter two lays out the theoretical framework for the research. The third chapter explores the Dutch labor market policies, and specifically the counselling process in Rotterdam. Chapter four is concerned with the empirical strategy used for this study, and the fifth chapter reports and discusses the results. Finally, the last chapter sums up, draws conclusions and provides suggestions for the municipality of Rotterdam.

2. THEORETICAL FRAMEWORK

2.1 General background

2.1.1 Benefit of caseworkers

The use of caseworkers in paving the way for welfare recipients to find a paid job is based on the assumption that their reintegration path is most efficient when this path is adapted to his personal situation and characteristics (Lechner & Smith, 2007). Moreover, caseworkers involve the welfare recipients in shaping their reintegration process. The rationale behind this approach is that when the welfare recipient feel engaged in his process, he is more committed and more intensely activated (European Commission, 2012). Furthermore, welfare recipients state they feel like their concerns and ideas are heard (Rosholm, 2014). Additionally, the process is viewed as fairer by the welfare recipients when they are included in the shaping process of their reintegration. This tendency applies, for instance, to sanctions, which are considered fairer to welfare recipients who have more communication with their caseworkers: the rules were clear from the beginning and they therefore feel that the sanctions are justified if they do not comply to these rules (Rosholm, 2014).

The meetings with caseworkers are supposed to have a positive effect on reemployment through several channels (Rosholm, 2014). Firstly, the meetings induce a more effective job search due to the support and expertise of the caseworker. He knows the current labor market situation, possible job opportunities, and can help the welfare recipient with the job applications. Secondly, the caseworker imposes sanctions if the welfare recipient does not comply to the rules. Since the welfare recipient prefers to avoid sanctions, he exerts more effort towards job-seeking. Thirdly, the meetings might increase the welfare recipients' motivation to find a paid job through the counseling sessions. The caseworker gives moral support in the job application process, which can be demanding and frustrating, especially upon multiple rejections.

Since there is no specific reintegration path that each welfare recipient has to follow, there is much room for caseworkers to give their own interpretation to the process. This interpretation is based mainly on their training and gut feelings, and can therefore be very divergent between caseworkers. As mentioned above, the caseworkers ideally look at the welfare recipient's profile and adapt the reintegration process accordingly. However, in reality, caseworkers rarely adapt the reintegration process to the individual welfare recipient, but have their own style that is less dynamic than supposed to, and focus primarily on the assessment of the efforts exerted by the welfare recipient. (Carling & Richardson, 2001; Richardson & Van den Berg, 2001; Schütz et al., 2011).

2.1.2 Typical reintegration path

Although there is no uniform reintegration path for each welfare recipient, there are two main components in the caseworkers' job: counseling and monitoring (Gautier & van der Klaauw, 2009; Rosholm, 2014). During moments of counseling sessions, the caseworker explores and

induces the welfare recipients' intrinsic motivation to work, and is focused on assistance and support. During the monitoring moments, the caseworker tests whether the welfare recipients complies to the imposed obligations. If the welfare recipient is not present during the meetings – without notice, or when the caseworker feels that he does not exert sufficient

There is no direction of exactly when and how to apply these two components into the caseworker meetings, and the caseworkers therefore rely on their gut feeling to shape the process.

Furthermore, there are several specific aspects that are typically part of the reintegration process. If there are no exemptions, it usually includes the obligation to exert verifiable job search effort, job search assistance, job interview training, vocational training or other educational programs, the requirement to apply for a certain number of jobs per week, and accepting "reasonable" offers, (OECD, 2007; Rosholm, 2014). These reintegration programs can be extremely costly, and interestingly, the existing literature is divided concerning their effectiveness.

2.2 Caseworker effectiveness

Since there is no one-size-fits-all reintegration path, questions have been raised about the optimal method for caseworkers that maximizes the outflow of welfare recipients into paid jobs. Hence, factors found to be influencing caseworker effectiveness have been explored in several studies. Some studies focus on the effect of caseworker meetings in general, and others on the effect of specific caseworker styles. This chapter will discuss the relevant literature. The first two sections give an account of the effect of caseworker meetings in general, and in the third and fourth sections the studies concerning specific caseworker styles during these meetings will be discussed. The last two sections explore research into optimal allocation of welfare recipients among the available caseworkers.

2.2.1   Contact density

The European Commission (2012) empirically analyzed data on caseworkers and welfare recipients in Austria, Denmark, Germany, Switzerland and the UK, and found that an increased number of contact points and a lower number of welfare recipients per caseworker both has a positive impact on caseworker effectiveness. This effect is confirmed by Van den Berg et al. (2012), who also report a rise in reemployment rates as the contact density increases. They suggest that the more frequent caseworker and welfare recipient meet, the better the results. Although a lower caseload and higher frequency of contact moments are costly, several studies have shown that these measures are cost-effective (Berg et al., 2012; European Commission, 2012; Gorter & Kalb, 1996; Hainmuller et al., 2011). Hainmuller et al. (2011), for instance, reported that an optimal caseload reduces the unemployment spell by 10 days on average. Furthermore, research by the Danish Economic Council found that more frequent communication between caseworker and welfare recipient leads to an average net-benefit of around €2000, - per unemployment duration (European Commission, 2012). Plus, a higher contact density does not only increase the reemployment rate, but also the employment

duration, although the positive effect is stronger for reemployment rate than for duration (Crépon et al., 2005; Gorter & Kalb, 1996). Since the effect is significantly larger for job-finding rates than for job duration, studies that consider solely one of these aspects may be misleading. However, there are studies reporting that the meetings do not always have a positive effect, and may even have a negative effect under specific circumstances. Broderson et al. (2014), for instance, conclude that in economic upturn, caseworker meetings have a significantly positive effect on job-finding rates, whereas during economic downturn, this effect is insignificant or even negative. The negative effect of the treatments may be induced by the 'lock-in' effect, which stalls the welfare recipient in his reintegration process until the program is finished. Furthermore, some studies claim that an increased number of contact moments is effective solely for welfare recipients that are relatively close to the labor market (Rosholm, 2014). Closer to labor market here indicates that the welfare recipient's profile – his set of skills and other characteristics – is in demand in the labor market. The positive effect of contact density is therefore not applicable if the probability of finding a job is low for a specific welfare recipient. Furthermore, Gorter and Kalb (1996) reported from their semi-experimental setting that the caseworker meetings had a significant negative effect on reemployment duration solely for welfare recipients that previously had been working on a temporary contract: the caseworkers' focus on getting a permanent contract had a reverse effect on those that were used to work under temporary contracts. These results raised the question to what extend the reintegration path had to be adapted to the welfare recipient in order to be optimally successful.

2.2.2 Threat effect

Not only a high frequency of caseworker meetings has a positive effect on reemployment rates, but also the fact that a caseworker meeting is scheduled is found to have such an effect (Van den Berg et al., 2012; Gautier & van der Klaauw, 2009; Rosholm, 2014). The sole fact that the welfare recipients have to meet with a caseworker and being imposed a labor conscription, which in practice means that the welfare recipients have to provide evidence of their job applications, increases the reemployment rate. In the Netherlands, around 17% withdraws their benefit claim when they discover the accompanying obligations (Gautier & van der Klaauw, 2009). One study found that job-finding rates increased by 46% after solely receiving an invitation of a meeting with a caseworker, stating the twofold purpose of the meeting: monitoring and counseling. The meetings therefore already have a positive effect on reemployment before they have taken place (Rosholm, 2014). However, the reemployment rate is significantly higher when the meetings actually do take place, than when the meeting is cancelled after sending an invitation. Furthermore, job-finding rates peak in the week in which the meeting is held, and decreases in the following weeks. This pattern is visible consistently and is not only present in the first meeting (van den Berg et al., 2012). It is therefore important to have the meetings, and not merely the threat of a meeting and related liabilities. Additionally, this threat effect is only present if the threat is credible. That is, if the

welfare recipients feel that the meeting will happen and they do have to comply with the corresponding obligations (Lalive et al., 2005).

2.2.3 Counseling vs monitoring

Turning now to the empirical evidence on the effectiveness of the different personal styles of the caseworkers, there are two main components of the caseworker's job: the counseling and the monitoring role. Thus, the caseworker is both a policeman and a social worker at the same time. The main goal of these two components combined is to increase job search efficiency (Gautier & van der Klaauw, 2009).

As a counselor, on the one hand, caseworkers are actively looking for the welfare recipient's intrinsic motivation, and provide support in job search and applications. Furthermore, the caseworker – as a counselor – identifies search channels, tempers welfare recipients' expectations about their prospective wages[1], gives moral support after (multiple) rejections to avoid discouragement. This last aspect of the counselor role is important because repeated rejection may eventually lead to a feeling of marginalization and social isolation, which is in turn detrimental to job-finding rates (Rosholm & Svarer, 2010). As a monitor, on the other hand, caseworker assesses the welfare recipients' efforts, requests proof of job applications, and imposes sanctions if that is deemed necessary. These sanctions are a punishment for incompliance with the rules, such as unnecessary job loss, too little job search effort, fraud, no-shows, or other unwillingness to participate (Gautier & van der Klaauw, 2009). The duration and severity of the sanction depends on the violation. The caseworker is ought to explain carefully why the sanction was imposed and how such punishment can be avoided in the future. The sanctioned welfare recipient is also placed under stricter monitoring.

Some research studies conclude that the caseworker is most effective when he focuses on the monitoring role (Behncke et al 2010b; McVicar , 2008; Rosholm, 2014; Schutz et al., 2011), whereas other state that the counseling role has a stronger positive effect (Card et al., 2009; Pederson et al., 2012; Rosholm & Svarer, 2010). These studies have drawn their conclusions on extensive caseworker-welfare recipient datasets from Switzerland and the Netherlands.

Another cluster of research studies reports that the caseworker's focus on either role depends on the circumstances and welfare recipients' profile. Broderson et al. (2014) suggest that counseling does not solely increase the reemployment rate, but that job stability is also higher after counseling-oriented sessions due to the improved job search as facilitated by the caseworker. This effect is likely due to the fact that if the job search is optimally conducted, which is induced primarily by the counseling role, the welfare recipient is more likely to end up with work that is suitable for his skills and preferences. Broderson et al. (2014) also conclude that women benefit most from a caseworker style focused on counseling and

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[1] The welfare recipients often have to accept a lower wage when they find a job then before their unemployment; they have company-specific skills and therefore cannot expect same wage at their new organization

support in job search, rather than emphasis on the monitoring role. Some argue that monitoring is an effective measure only for target groups that have a larger distance from the labor market, especially if they have been unemployed for a longer period of time (European Commission, 2012; Gautier & van der Klaauw, 2009). Kluve (2006), by contrast, provides evidence that the monitoring effect is stronger for welfare recipients that have a relatively small distance to the labor market. Lalive et al (2005) state that monitoring is effective if and only if it is combined with a credible threat of sanctions where their benefit is cut, which means the caseworker has to be consistent in his words and actions. Sanctioning with credible threat is found to increase the job finding rate by 40% (Lalive et al., 2005). This result suggests that welfare recipients are sensitive to financial incentives.

In sum, there is little agreement among academic studies on which caseworker role is more important for his success rate: counseling or monitoring. However, the inconsistency between these studies may in part be explained by the different dependent variables that the authors used. Some researchers estimated the effect of specific caseworker styles on the reemployment rate, i.e. finding a job, whereas others examine how the employment duration was affected. As mentioned above, the effect of specific programs and caseworker styles may be different for reemployment rate and reemployment duration. Furthermore, many studies look at average treatment effect, even though it is evidenced that certain programs and styles are much more effective for certain welfare recipient profiles than others (Behncke et al., 2010a; Behncke et al., 2010b; Frolich, 2001; Rosholm). These studies conclude that optimal effectiveness can be reached only if the reintegration process is shaped for each individual separately. For instance, Richardson and van den Berg (2001) find a zero net effect of caseworker treatments. However, this may be due to the fact that they consider solely the average effect of the treatment, rather than accounting for heterogeneity of welfare recipients in their sample. A specific program may be effective for some welfare recipients, but can have adverse effects on others. Hence, if a literature study finds an insignificant or negative treatment effect, this does not necessarily suggest that the program should be abandoned: it may be that the program was not optimal for the participants included in the sample.

2.2.4 Toughness vs. cooperation

Another body of literature has examined the difference in effectiveness between tough and cooperative caseworkers. Johnson and Klepinger (1994) found that a tougher approach reduced the unemployment spell in the U.S. by 3 weeks on average. Manning (2009) reports similar results, but specified that upon outflow out of the welfare system, they often moved into a different benefit system. Hence, deregistering from the welfare system does not necessarily mean they have found a paid job. Huber et al. (2014) argue that a tough counseling style increases the reemployment rate as well. Specifically, they show that toughness increases pressure to accept job offers, and induces the capability of imposing credible threats. A credible threat of sanctioning incompliance to the rules is found to be a strong motivator of reemployment, irrespective of the severity or duration of the sanction (Lalive et

al., 2005). Research indicates that a tough caseworker is more capable of imposing a credible threat than those that are focused on cooperation (Rosholm, 2014). However, how effective this tough approach actually is, depends on one's definition of success: is fast or sustainable employment more important. A strict monitoring and communication regime is found to have positive influence on job finding rates, but not on job stability (European Commission, 2012). This means that these welfare recipients often claim another welfare subsidy after having had a paid job for a certain amount of time. The European Commission (2012) claims that, in order to induce employment stability, caseworkers should focus more on the counseling component of their work. Therefore, it is uncertain whether being tough is necessarily beneficial to reintegration. Other studies also state that caseworkers that feel cooperation and a harmonious relationship with the welfare recipient are of minor importance seem to have higher reemployment rates. Specifically, if the caseworker has a tough, demanding approach, the employment rate increases 2 percentage points compared to when he is soft and accommodating (Behncke et al., 2010a). However, this effect is likely stronger than the observed 2 percentage points, as tough caseworkers in Switzerland are matched more often to welfare recipients with larger distance to the labor market. Hence, the majority of the available literature argues that a tough approach is more effective than a cooperative effective caseworker style. This result suggests that municipalities should consider toughness in their hiring process, as well as the caseworkers' training.

Interestingly, the majority of questioned caseworkers indicate that cooperation is extremely important and the wishes of the welfare recipient must be satisfied (Behncke et al., 2010a). Although it is uncertain whether this survey had suggestive questions, this result does indicate that caseworkers, despite their training and experience, do not necessarily know what approach is most effective.

It could be that the caseworkers are more effective with some type of welfare recipients than with others because the caseworker's profile and approach happen to be fitting for the welfare recipient, or because the caseworker and welfare recipient show similarities in several socio-economic dimensions, such as age, gender, nationality and educational level (Bencke et al., 2010). The next section will discuss the rationale behind this similarity theory in more detail.

2.2.5 Similarity

Behncke et al. (2010b) state that in order for the reintegration process to be most effective, there should be mutual trust and clear communication between the caseworker and welfare recipient. They argue that the necessary trust and communication clarity is reached when the welfare recipient feels understood, and when he identifies with the caseworker. They found evidence supporting this claim when they researched the effect of similarity between caseworker and welfare recipient around three years after applying for a welfare subsidy. When the caseworker and welfare recipient in their dataset had similar age, gender, and education level, the welfare recipient has increased levels of employment rate and job stability, whereas the levels of unemployment benefit rates, and out-of-labor force rates are

reduced. However, this effect is only significant if all three dimensions are similar (age, gender and education level), a match on merely one or two dimensions is insufficient to bring about the positive effect. Thus, the caseworker must have a significantly similar profile as the welfare recipient in order for them to share a social identity (Behncke et al., 2010b). This theory may also explain why having a university degree reduces the caseworker's effectiveness (Frölich et al., 2007): most welfare recipients have lower educational degrees, causing caseworkers with lower degrees to be more similar and thus more effective. When this similarity is considered while allocating welfare recipients among caseworkers, the positive effect on the employment rate is found to be 3-4 percentage points in Sweden. In Rotterdam, around 5% of welfare recipients flows out into paid work within 2 years. If the positive employment effect found in Sweden is representative for the Netherlands, optimal caseworker matching could increase this rate from 5% to 8%. This seems to be a sufficiently significant increase in the reemployment rate to consider and further explore this approach in the Netherlands.

2.2.6 Optimal allocation: a statistical approach

Alternatives to having caseworkers shaping the integration paths are treating all welfare recipients the same, randomly assigning them to an employment or training program, or basing the allocation on statistical data, such as in the similarity-approach. Lechner and Smith (2007) find in their study that shaping the reintegration path based on statistical rules of thumb is as least as effective as basing it on the caseworkers' gut feelings. In fact, they report that randomly assigning welfare recipients to a reintegration path leads to the same employment rate after a year as the path shaped by caseworkers' gut feelings. The employment rate increases by 14 percentage points when the welfare recipients are optimally divided among caseworkers; an allocation conditional on the welfare recipients' characteristics. (Lechner & Smith, 2007). The authors propose several explanations for the suboptimal reintegration process when relying on caseworkers' gut feelings: special interests at work, human errors of design, or the outcome of combining many different policy goals (Lechner & Smith, 2007, p.150).

These research results suggest that it is important to consider the welfare recipients' characteristics in the shaping process of the reintegration path, which would significantly improve the efficiency of their reintegration. According to several researchers, the shaping of reintegration path is still too much affected by the caseworker's personality and profile, while there is too little focus on the welfare recipients' characteristics (Carling & Richardson, 2001; Manski, 2000a; Richardson & van den Berg, 2001). If academic literature is divided about the most effective reintegration of welfare recipients, it is unlikely that caseworkers perform their jobs optimally. Caseworkers rely on their gut feeling and develop a specific method of working, of which the effectiveness may vary greatly among welfare recipients (Lagerstrom, 2011). Randomly assigning welfare recipients to caseworkers therefore seems like a suboptimal solution.

It is argued that an optimal allocation of reintegration programs among welfare recipients is reached when the program is allocated to the individual where it has the highest

expected benefit, conditional on the recipients' profile. The optimal allocation efficiency can be reached with statistically estimation that accounts for the welfare recipients' background characteristics.

3. INSTITUTIONAL SETTING

3.1 Dutch labor market

Although the Netherlands has a relatively low unemployment rate, their spending on social welfare is the largest from all OECD countries (Gautier & van der Klaauw, 2009). In 2014, NL spent 2.7% of its GDP on labor market policies, of which over 1 percentage point on active labor market policy (Rosholm, 2014). However, the rules are becoming stricter. Since 2015, the participation-law is effective in Rotterdam. This means that welfare recipients are required to do something in return for their benefit, and have more obligations to the municipality. Upon filing for a welfare subsidy, the welfare recipient is matched to a caseworker at random. The welfare recipient usually remains with the same caseworker, barring some exceptional cases. When the welfare recipient has found a job and returns to the welfare system after an employment spell, the caseworker is again assigned randomly, so a repeat welfare beneficiary is not necessarily linked to the same caseworker as before.

In order to receive a welfare benefit, one must not be eligible for other benefits, one must be legally living in the Netherlands, and be over 18 years old. The height of the benefit depends on the household composition, available sources of income and what is considered the social minimum. Hence, if the unemployed individual's partner has a sufficiently high salary, or the individual owns real estate, he is unlikely to quality for the welfare benefit. The height of the welfare benefit is linked to the minimum wage in the Netherlands; a single parent receives, for instance, 70% of the net minimum wage, whereas a single individual without children receives 50%.

Although the height of the welfare benefit is fixed and determined by the national government, there is high regional autonomy in the Netherlands. The municipalities may give their own interpretation to the (active) labor market policies. For instance, the municipalities can add an additional amount to the fixed benefit, for instance to incentivize welfare recipients to go to sports or language classes, and have the authority to cut benefits as a punishment for incompliance to the rules. The approach taken by municipalities varies greatly among the Dutch regions.

3.2 Situation in Rotterdam

Rotterdam has a different approach than other municipalities, and is known as one of the stricter welfare regions in the Netherlands. The municipality divides individuals that claim a welfare benefit into three groups: reintegration, activation, and youth. Individuals in the reintegration group have relatively small distance to the labor market, and the caseworker estimates that there is a high probability of that client finding a job within a year. The focus in

this group lies on labor development and reintegration into the labor market, in order to have them flow out of the welfare system into paid work as quickly as possible. Individuals in the activation group have a larger distance to the labor market, often have been receiving welfare for a long time, and have very little work experience. Since the chance of them finding a job soon is little, the aim of this program is to increase their level of participation in society. Hence, these welfare recipients are required to conduct at least 20 hours a week, or to capacity, of voluntary work, caretaking, and/or language or sports classes. If they fail to comply to this rule, they are obliged to compensate for their welfare benefit by working for the government for 8 hours a week. Younger welfare recipients are required to make agreements with their caseworker concerning returning to school and/or making steps towards the labor market (Gemeente Rotterdam, 2015a). Table 1 presents the number of welfare recipients in each group, and the aim of each group.

The caseworkers in Rotterdam do not only differ in programs they believe in and assign to their clients most often, but also in their personal communication style, which can be focused on either cooperation or toughness. Typically, caseworkers are motivated to develop their own style. There is no direct monetary incentive for caseworkers for effective reintegration – where effective means that the welfare recipient has found a paid job and is no longer relying on the benefit subsidy. The caseworker looks for intrinsic motivation of the welfare recipient, assesses capabilities and limitations or obstacles for the welfare recipient to find a paid job. The caseworker and welfare recipient make agreements concerning the help they will receive, the number of job application they have to file – and provide evidence for –, and can appoint exemptions for these and other obligations. If welfare recipients do not comply with the agreements that were made with their caseworker, their welfare subsidy can be cut, or, upon multiple violations or no-shows, completely withdrawn. Hence, the caseworker has considerable amount of power over the welfare recipient, next to their allocation to a specific reintegration program.

Table 1: an estimation of the total number of welfare recipients per groups on December 2014.

Target group	Number of welfare recipients	Specifics
Reintegration	17500	Focus on labor development and reintegration into the labor market
Activation	17000	Focus on compensating for the received benefit to activate welfare recipients
Youth	3500	Focus on return to school and/or steps towards labor market
Total	38000	

This research paper focuses solely on the reintegration group, with welfare recipients who are closer to labor market. The reintegration path in this group includes several programs, on

which the caseworkers make a decision. This allocation is based on need for assistance, labor potentials, and possible limitations for employability. The main two groups are matching and pre-matching, of which the matching group is deemed closest to the labor market. In the matching group, welfare recipients are obligated to make steps towards the labor market. Possibilities include doing internships, paid work for 8 hours a week, group training with other welfare recipients, schooling, and job coaching. In the pre-matching group, programs are focused on reducing the distance to the labor market. Possibilities include extensive assistance in eliminating obstacles for employment, schooling or vocational training, sports classes to improve health, and getting familiar to the work routine (Gemeente Rotterdam, 2015b). The yearly outflow of welfare recipients in the activation group in Rotterdam into a paid job is currently around 5%.

4. EMPIRICAL STRATEGY

In order to assess whether there is indeed heterogeneity in caseworker effectiveness across welfare recipient characteristics, data as provided by the municipality of Rotterdam are analyzed. Initially, it was attempted to obtain data on the caseworker characteristics as well as on the welfare recipients, so the similarity-approach as described in the theoretical framework could be empirically tested. Unfortunately, this request was denied by the municipality due to privacy reasons. Therefore, this research is limited to examine the heterogeneity of effectiveness among caseworkers for specific welfare recipient characteristics. In this section, the available data and empirical strategy of the study are discussed.

4.1 Included variables

The dataset includes a total of 5738 welfare recipients, which includes all who have been assigned to the 'reintegration group' (see table 1) in 2014 and 2015, and the dependent variable is whether or not the welfare recipient is registered out of the welfare system in March 2016. Hence, some welfare recipients in the sample have had a longer reintegration path than others. Additionally, the caseworkers may have more welfare recipients in their caseload than the ones included in this analysis. A welfare recipient is registered out of the welfare system if they have found sufficient income from reemployment. The majority of these deregistered welfare recipients, a total of 256, deregistered because they found sufficient income from regular work. Seven welfare recipients found sufficient income from subsidized labor, and 19 from freelancing.

The majority of the control variables included in the analysis concern welfare recipient characteristics. As a result of the caseworker meetings, the caseworkers register information about the welfare recipients, of which some were made available for this analysis. For instance, caseworkers note some basic information, if there are concerns for employability, and other specific information such as attitude, motivation and social skills. Together, these characteristics, which are in part subjectively assessed by the caseworker, are assumed to capture the unobserved variables related to the welfare recipients' distance to the labor market. Below, table 2 presents a full overview of the included characteristics of the welfare recipients.

Table 2: Control variables included in the analysis

Control variables	Specification
Objective judgment by caseworker	
General	Gender, age, neighborhood of residence
Industry of desired job	Care, social, cleaning, transport, agricultural, construction, industrial engineering, industrial cleaning, hospitality, retail & wholesale, security, IT, call center, administrative, educational, and recreation sector

Additional aid	Health insurance, income, housing, day care
Other details	Exemption labor conscription
<u>Subjective judgment by caseworker</u>	
General assessment	Motivation, representativeness, flexibility, persistence, independence, initiative, personal care, communication, attitude, inquisitiveness
Concerns for employability	Financial or motivational problems, lack of presentation or language skills, physical or psychological limitations, living situation, duty of care, addiction, currently following an education, lack of computer skills, incapacitated, pregnancy leave, social isolation, childcare, criminal record

4.2 Data restrictions

The dataset used for this analysis contains solely welfare recipients in Rotterdam who were registered in 2014 and 2015. This is due to the fact that the method of registration was different before 2014, causing them to be incompatible for analysis. Furthermore, only cases for which only one caseworker was assigned are included in the analysis. The few cases that had switched caseworkers were excluded from analysis, in order to isolate the individual caseworker effect as much as possible. Additionally, there is unfortunately no data on what happened after the welfare recipients was deregistered from the welfare system: we know they have found sufficient income from paid labor, but we have no information on the job stability or salary. This analysis is therefore limited to the reemployment rate as a depend variable, and does not include information on the quality of the found job. Welfare recipients who were deregistered from the system for other reasons than finding paid work – such as flowing into another governmental aid program – are excluded from the analysis as well. This restriction is imposed because the dependent variable in this study is outflow to paid work, rather than outflow out of the welfare system. A total of 19 welfare recipients have been excluded from the analysis as a result of this restriction. Also, there is no information available concerning the chosen reintegration programs. Besides the contact density, which is not included in the analysis as this variable is presumably highly endogenous, there is no data on other aspects of the reintegration programs that the caseworkers enroll their welfare recipients in. Furthermore, for the subjectively assessed characteristics (see table 4), such as motivation and inquisitiveness, there were several unknown cases, which indicates that the caseworker did not assess, or did not register this information. These unknown cases were treated as neutral cases: between – and +. This way, these variables could be included in the analysis without loss of data points. The disadvantage of this approach is that it is possible that the fact that a case is unknown, may be related to the characteristics of either the caseworker or the welfare recipient. This would mean that these assessment variables are noisy and the interpretation of the results of these variables should be done with caution. However, it could also be that these unknowns are random, and that for a sufficiently large

sample, the unknowns combined can be assumed to be more or less average. The fraction of unknowns here is generally between 16 and 33. Below, table 3 presents the number of unknown cases per assessment variable. Additionally, education level is an unreliable variable in this dataset, because the caseworkers have not consistently registered this characteristic: many data points are missing or provide contradicting information. It was initially meant to be included to test the similarity-theory by Behncke et al. (2010b). However, this variable was unreliably registered, and therefore not included in this analysis.

Table 3: Ordinal categorical variables included in analysis and their occurrence

Assessment Variable	-- (%)	- (%)	+ (%)	++ (%)	Unknown (%)
Motivation	2.8	15.4	48.1	17.1	16.6
Flexibility	4.9	27.7	34.6	6.7	26.1
Persistence	1.8	16.9	39.0	8.4	33.8
Independence	3.3	20.3	41.6	7.9	27.0
Initiative	3.0	21.2	36.1	6.6	33.2
Communication	3.6	14.0	50.0	15.4	17.0
Representativeness	1.0	11.1	55.1	10.7	22.2
Attitude	1.4	12.5	52.7	14.6	18.8
Personal care	0.4	5.3	62.5	13.7	18.1

4.3 Descriptive statistics

In this section, the descriptive statistics of the dataset will be provided. The age of the welfare recipients in the dataset is ranging from 18 to 67 years old, with an average of 39.45 and a standard deviation of 9.96. Furthermore, there are a total of 106 caseworkers included in the dataset. The average caseload of these caseworkers is 40.6 with a standard deviation of 36.0. This caseload concerns only the welfare recipients that have applied for a welfare benefit in 2014 and 2015. Note that the caseload may be higher than presented in this dataset: welfare recipients are not considered in this analysis if they have applied for a welfare benefit before 2014 or after 2015.

Also, the descriptive statistics of the nominal categorical variables are discussed. Out of the 5930 welfare recipients included in the sample, 5 percent has found a paid job by March 2016, while the other 95 percent still receives a welfare benefit. This percentage is representative for the whole activation group[2]. 52 percent of the sample is female, whereas 48 percent is male. Furthermore, the caseworkers indicated that for 70 percent of the included welfare recipients, they have noticed a concern for their employability. The three most frequent concerns are described here. Unsurprisingly, the majority of these people are in financial distress. A third of the sample has such financial problems that the caseworker indicated that it may form an obstacle for reemployment. 22 percent of the welfare recipients are indicated to have psychological limitations, and 12 percent has a language deficit that are

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[2] According to Mr. F. Moors, researcher at the Research & Business Intelligence department of the municipality of Rotterdam

likely to hinder reemployment. A full overview of the nominal categorical variables can be found in table 4.

Table 4: nominal categorical variables included in analysis with frequency of occurrence

Variable		Number of Observations	Percentage (%) of total
Outflow to paid job	Applicable	296	5
	Not applicable	5634	95
Gender	Male	2822	47.6
	Female	3108	52.4
Industry of desired job	Care	444	7.5
	Social	212	3.6
	Cleaning	513	8.7
	Transport	494	8.3
	Agricultural	89	1.5
	Construction	185	3.1
	Industrial Engineering	252	4.2
	Industrial Cleaning	36	0.6
	Hospitality	302	5.1
	Retail & Wholesale	391	6.6
	Security	67	1.1
	IT	49	0.8
	Call center	89	1.5
	Administrative	335	5.6
	Educational	49	0.8
	Recreational	19	0.3
Employability concerns	Present	4149	70
	Not Present	781	30
	Financial distress	2002	33.8
	Motivation	55	0.9
	Representativeness	43	0.7
	Living situation	306	5.2
	Duty of are	109	1.8
	Language	698	11.8
	Incapacitation	40	0.7
	Physical limitations	1857	31.3
	Psychological limitations	1336	22.5
	Addiction	110	1.9
	Following education	16	0.3
	Pregnancy leave	37	0.6
	Social isolation	54	0.9
	Child care	397	6.7
	Criminal record	227	3.8
	Lack of computer skills	230	3.9
Additional aid	Housing	53	0.9
	Income	17	0.3
	Health Insurance	24	0.4

Daycare	57	1.0
Other	41	0.7

Additionally, the industry of the job desired by the welfare recipients has been recorded. The care, transport, and cleaning sectors are most common in this sample. A relatively small fraction of the sample receives additional governmental aid: no more than one percent for each of the components – housing, income, health insurance, daycare and other. Also, the neighborhood of residence is registered. Turning now to the descriptive statistics of the assessment variables. These variables concern the subjectively assessed information about the welfare recipients. Specifically, aspects of the welfare recipient are described, such as motivation, persistence and attitude. Especially initiative, flexibility and independence are assessed as negative most frequently. Communication and representativeness are assessed as relatively positive. Table 3 presents these assessment variables in further detail.

4.4 Statistical analysis

We estimate a linear regression with deregistration out of the welfare system as a dependent variable. Four different models will be estimated, all with the same dependent variable. An overview of the four models is presented in table 5. Model A includes solely the caseworker dummies as independent variables. They are all but one included: caseworker number 2 is the base category. This caseworker has 197 welfare recipients in his caseload, and his effectiveness rate is slightly above the average, with a reemployment rate of 5.6% (compared to the average of 5%). Model B adds the welfare recipient controls to the estimation. These variables include both objectively and subjectively assessed information about the welfare recipients. Model C is the full model, which includes also the interaction effects between the caseworker dummies and three different variables. The estimation of these interaction effects will indicate whether that specific caseworker is more or less effective with this particular group of welfare recipients. The variables chosen for the interaction effects are age, gender and whether or not the welfare recipient has psychological limitations. Age and gender were chosen because of two reasons. Firstly, because they were reliably registered for all welfare recipients in the dataset. Secondly, because it has been suggested that there exists heterogeneity in caseworker effectiveness for both variables (Behncke et al., 2010b). The variable psychological limitations has been chosen for an interaction effect because a significant fraction of the welfare recipients in the dataset has this feature; no less than 22.5%. The only personal control variables with a higher percentage of occurrence are financial distress and physical limitations. These variables could have been used for interaction effects as well. However, due to the fact that psychological limitations may be more difficult to work with during meetings and communication in general, this variable was chosen. The interaction effects were created solely for three variables, rather than all of them, due to a lack of statistical power for other variables. The analysis is carried out using STATA v.14.

Since the dependent variable is binary, logistic regression provides us with more precise estimates (Hellevik, 2009). However, a linear regression analysis was used for

convenience purposes. The results of this analysis are presented in the next chapter. Although its lower precision, the linear regression estimates are still valid. The logistic regression estimates are provided in the appendix for comparison. This logistic analysis does not yield different results than the OLS regression, as becomes evident from table 8 in the appendix: the signs and significance levels are similar for both regressions. The sole significant difference is that some of the interaction effects between the variables caseworkers and both gender and psychological limitations in the logistic regression are omitted because of collinearity. The B-coefficients and their standard deviation resulting from the logistic regression can be found in table 8 in the appendix.

Table 5: Overview of the four models in this analysis.

	Model A	Model B	Model C
Caseworker dummies	X	X	X
Personal controls		X	X
Interaction effects			X

5. RESULTS AND DISCUSSION

5.1 General caseworker effectiveness

Linear regression was used to estimate the heterogeneity of caseworker effectiveness in general, and across different welfare recipient characteristics. Below, figures 1 to 3 present the B-coefficients per caseworker for each model and the 95% confidence interval, as resulted from the OLS regressions. The B-coefficients per caseworker, their standard deviations, and the significance of difference with the base category are presented in table 9 in the appendix. It is apparent from the results that there is a number of caseworkers that perform significantly different from the base category (caseworker 1). A total of 11.3 percent of all included caseworkers has a significant B-coefficient. in at least one of the models, and therefore is suggested to have a significantly higher (or lower) probability of having their welfare recipient flow out of the welfare system into paid work. The estimates for these caseworker dummies are divergent: varying from -0,056 (who represent the caseworkers with zero outflow) to 0,244 in model A. The caseworker effectiveness rates are more or less evenly distributed: about half of the caseworkers has an effectiveness lower than the reference category, for both significant and insignificant B-coefficients. This distribution is found in all three models. The slightly more negative coefficients may be a result of the fact that the reference category has an effectiveness rate that is slightly above the average of the whole sample. These results indicate the presence of heterogeneity of effectiveness among caseworkers, both with and without control variables included in the regression. The three models yield respectively 12, 16 and 11 significant caseworker effectiveness rate coefficients, which is between 10 and 15 percent of the total. These results indicate that 10-15% of the caseworkers is significantly more or less effective than the average.
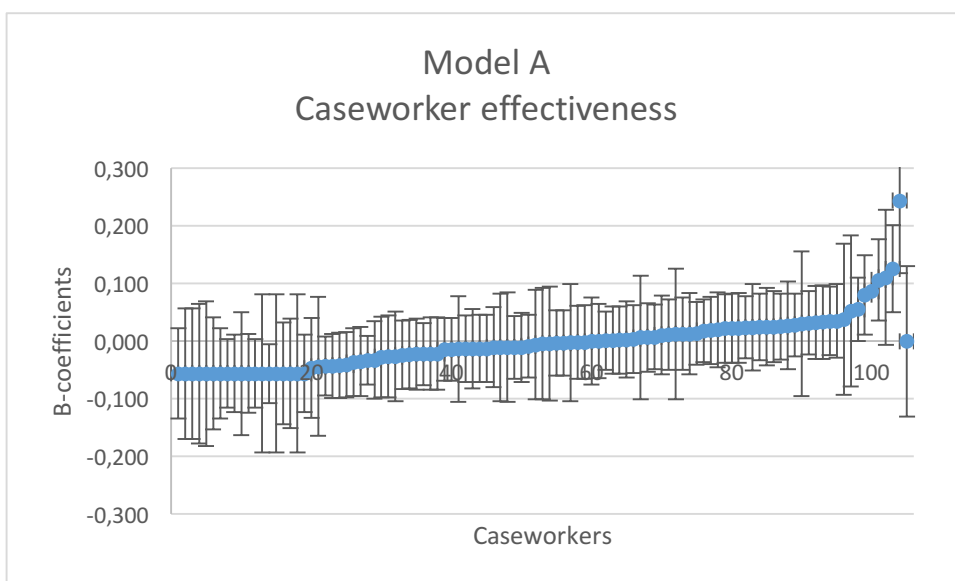
Figure 1: B-coefficients and 95% CI per caseworker of Model A
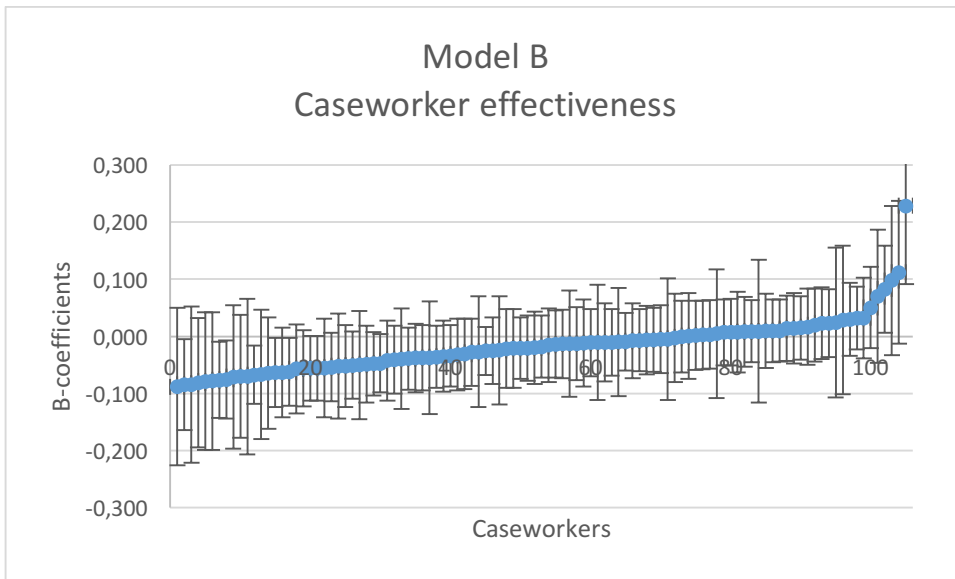
Figure 2: B-coefficients and 95% CI per caseworker of Model B
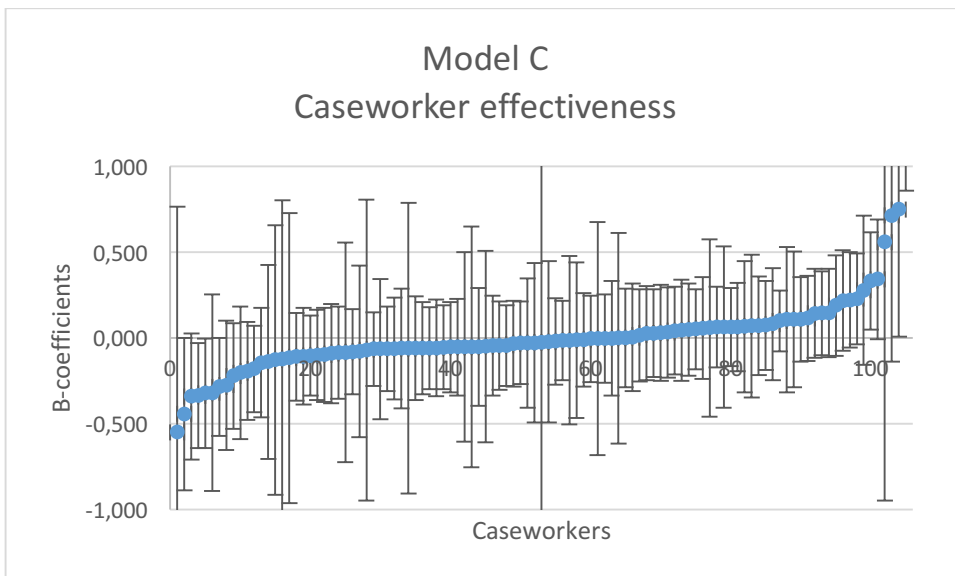
Figure 3: B-coefficients and 95% CI per caseworker of Model C

The following section contains a discussion of the significant results per model, as presented in table 6 below. Table 6 illustrates the B-coefficients and standard errors of the other variables for each model. The results concerning the interaction effects are presented separately in figures 4-6. The corresponding B-coefficients and standard errors are presented in table 9 in the appendix.

Table 6: Regression output of OLS Models A, B and C, *= p<0.10, **= p<0.05, ***= p<0.01

Variable	Model A B-coefficient	St. dev	Model B B-coefficient	St. dev	Model C B-coefficient	St. dev
Constant	0,056***	0,015	0,046**	0,021	0,030	0,067
Female	-	-	-0,019***	0,007	0,029	0,056
Age	-	-	0,000	0,000	0,000	0,001
Industry of desired job						
Care	-	-	0,011	0,011	0,009	0,012
Social	-	-	0,004	0,016	0,010	0,016
Cleaning	-	-	-0,003	0,011	-0,005	0,011
Transport	-	-	0,032***	0,011	0,033***	0,011
Agricultural	-	-	0,007	0,024	0,017	0,024
Construction	-	-	0,055***	0,017	0,045*	0,017
Industrial Engineering	-	-	0,005	0,015	0,006	0,015
Industrial Cleaning	-	-	0,042	0,037	0,053	0,038
Hospitality	-	-	0,011	0,013	0,017	0,013
Retail & Wholesale	-	-	0,006	0,012	0,005	0,012
Security	-	-	-0,004	0,027	-0,002	0,028
IT	-	-	-0,015	0,032	-0,002	0,033
Call center	-	-	0,068***	0,024	0,065***	0,025
Administrative	-	-	0,021*	0,013	0,019	0,013
Educational	-	-	0,073**	0,032	0,066**	0,033
Recreational	-	-	-0,020	0,050	-0,022	0,051
Assessment variables						
Motivation	-	-	0,011***	0,004	0,013***	0,004
Flexibility	-	-	0,008***	0,003	0,008**	0,003
Persistence	-	-	0,003	0,003	0,003	0,003
Independence	-	-	0,005	0,004	0,005	0,004
Initiative	-	-	-0,008**	0,003	-0,007**	0,003
Communication	-	-	-0,006	0,004	-0,007	0,004
Representativeness	-	-	0,000	0,004	0,000	0,004
Personal care	-	-	-0,003	0,004	-0,003	0,004
Attitude	-	-	-0,001	0,004	-0,001	0,004
Concerns for employability						
Financial distress	-	-	0,012*	0,007	0,014**	0,007
Motivation	-	-	-0,014	0,032	-0,010	0,033
Representativeness	-	-	0,013	0,034	0,004	0,035
Living situation	-	-	-0,022*	0,013	-0,035***	0,014

Duty of care	-	-	-0,025	0,021	-0,019	0,022
Language	-	-	-0,019**	0,010	-0,017*	0,010
Incapacitation	-	-	0,013	0,035	0,011	0,036
Physical limitations	-	-	0,012*	0,007	0,013**	0,007
Psychological limitations	-	-	0,012	0,008	-0,016	0,067
Addiction	-	-	0,023	0,022	0,017	0,022
Following education	-	-	-0,053	0,054	-0,050	0,056
Pregnancy leave	-	-	-0,046	0,036	-0,053	0,037
Social isolation	-	-	-0,006	0,031	-0,014	0,032
Child care	-	-	0,006	0,012	0,006	0,012
Criminal record	-	-	-0,032**	0,016	-0,027*	0,016
Lack of computer skills	-	-	-0,021	0,016	-0,022	0,016
Additional aid						
Housing	-	-	-0,020	0,045	-0,018	0,047
Income	-	-	-0,058	0,080	-0,066	0,082
Health Insurance	-	-	0,073	0,073	0,105	0,074
Daycare	-	-	0,020	0,043	0,002	0,044
Adjusted R²	0,006		0,032		0,024	

As visible in table 6, the adjusted R-squared increases from 0.006 to 0.032 between model A, B and C. Hence, the indicators in model B account for a larger proportion of the variance in outflow into a paid job – the dependent variable – than model A and C. However, the adjusted R-squared is low for all three models.

Furthermore, there are some control variables concerning the welfare recipient characteristics that have significant estimates. The significant estimates for models B and C are fairly similar. In model B, being female statistically significantly reduces a welfare recipients' probability of flowing out of the welfare system – by 2% on average. This finding suggests that males are more likely to find paid work than women in this sample. In model C, when the interaction effects are included, this association is not significant anymore. Furthermore, if a welfare recipient desires a job in the transport, construction, administrative or educational sectors, or in a call center, he has a significantly higher probability of flowing out of the welfare system in model B. This result is similar for model C, barring the administrative sector, which is not significant here. For instance, if one desires a job in the educational sector, he is on average around 6-7% more likely to flow out of the welfare system than when he is not. This result could suggest either that there are currently more jobs in these sectors, or that welfare recipients that desire jobs in these sectors are on average closer to the labor market.

Additionally, there are personal characteristics that are subjectively assessed by the caseworker with significant estimates. Well assessed motivation and flexibility has a

significant positive effect on outflow in all three models, although the association is merely around 1%. Interestingly, well assessed initiative has a small but significant negative effect on outflow. This is unexpected, as it is more logical to assume that if one takes initiative, he is more likely to reach his goal, which in this case is to find paid work. These variables may be noisy, however, as there are unknowns included in the analysis. This therefore may explain the small estimates and the unexpected result concerning initiative.

There are also several concerns for employability that have significant estimates. Interestingly, being in financial distress and having physical limitations have a significant positive effect on outflow in this analysis. It was assumed that all concerns for employability would reduce the probability of finding paid work, but these table present different results. It should be noted, however, that the effect is generally quite small. Also, the government subsidizes a certain amount of jobs for people physical limitations. Hence, the positive effect of these concerns may stem from these subsidies. The caseworkers' concerns about living situation having a criminal record have a significant negative effect in respectively all three models, and model B and C. These results are unsurprising, as it makes sense that a poor living situation and a criminal record reduce one's probabilities of finding paid work.

5.2 Interaction effects

Turning now to the results from the interaction effects in model C. As explained earlier, table 10 in the appendix presents the coefficients and their standard deviations per caseworker. These coefficients and their 95% confidence intervals are also plotted below. For each interaction variable (gender, age and psychological limitations), there are several statistically significant coefficients for all three variables.
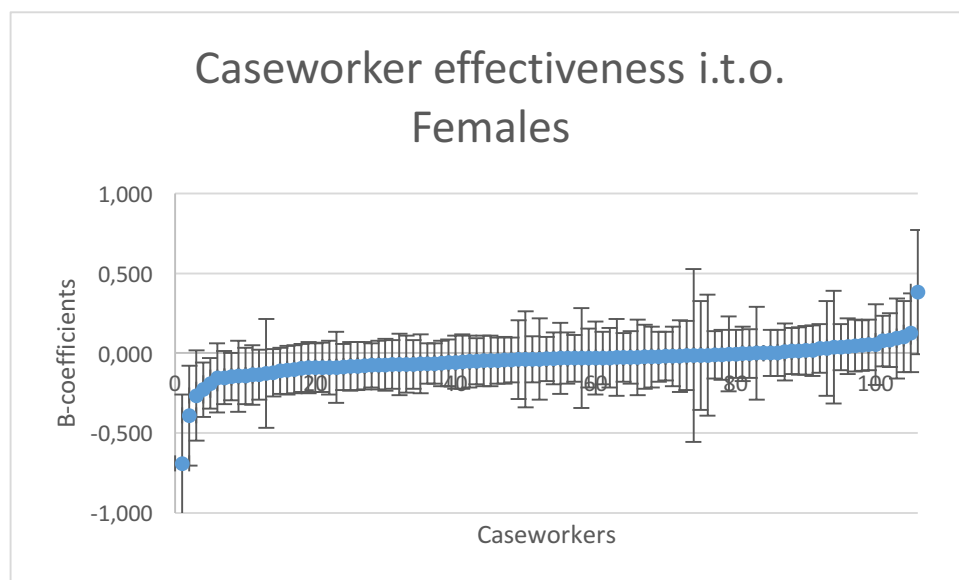
Figure 4: Caseworker effectiveness with female welfare recipients. B-coefficients and their confidence interval.

Firstly, the interaction effects for gender are discussed. A total of 10 interaction effects have significant estimates, which is about 9 percent. Caseworkers with a significant positive (negative) interaction effect appear to be significantly more (less) effective with women than

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with men in this dataset. 90% of these significant cases are negative, which is in line with the findings that men have a slightly higher probability of outflow to paid work than women in the sample. For example, caseworker 33 has the strongest negative association of -0,690 with a significance level of below 0,01. This suggests that the effectiveness of this caseworker may be significantly increased he has mainly males in his caseload, and it may be suboptimal to assign female welfare recipients to this caseworker. Hence, the first sub research question is confirmed by this analysis: there is indeed heterogeneity in caseworker effectiveness with female welfare recipients.
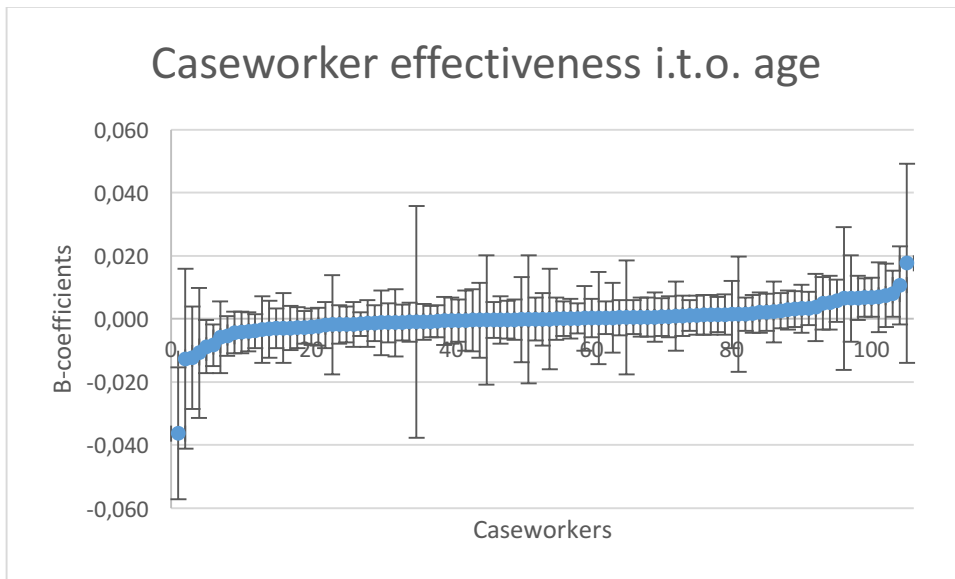
Figure 5: Caseworker effectiveness with welfare recipient in terms of age. B-coefficients and their confidence interval per caseworker.

Secondly, we turn to the interaction effects of the caseworker dummies and the variable age, we see that 10 estimates significantly affect welfare recipient outflow, which is around 9% of the total number of caseworkers. About half of these significant cases are positive estimates, indicating that these caseworkers are more effective with older welfare recipients than with younger welfare recipients. The highest significant positive coefficient is 0,018. Other caseworkers, on the other hand, appear to be more effective with younger welfare recipients. The lowest significant coefficient is -0,036. Note, however, that the coefficients are mostly much smaller than for the gender interaction effects. Hence, the second sub question concerning caseworker heterogeneity across different ages is statistically confirmed as well, although less convincingly than the first sub question due to the small coefficients.
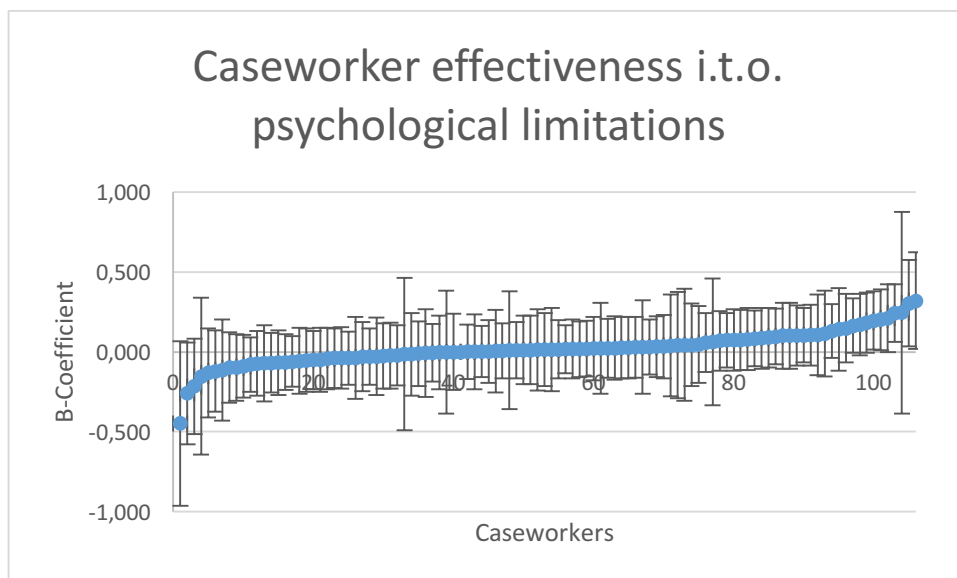
Figure 6: Caseworker effectiveness with welfare recipient with psychological limitations.. B-coefficients and their confidence interval per caseworker.

Lastly, the interaction effect between the caseworker dummies and the variable psychological limitations will be discussed. A total of 10 interaction effects is significant, which is about 9% of all caseworkers. Specifically, some caseworkers are significantly more effective with welfare recipients with psychological problems. The highest significant positive coefficient is 0,320, which suggests that that specific caseworker on average is 32% more effective with welfare recipients that are assessed to have psychological limitations than with those that do not. Other caseworkers are significantly less effective with such welfare recipients, with -0,447 being the strongest significant negative coefficient. The strength of these interaction effect estimates is generally higher than the age interaction effects, and comparable to the gender interaction effects. Hence, the third sub question is confirmed as well: there is heterogeneity in caseworker effectiveness with welfare recipients with psychological problems. These results indicate that overall outflow may be improved if the welfare recipients with psychological problems are allocated across the caseworkers according to the caseworkers' specific effectiveness rates.

Taking together, these results suggest that there indeed is heterogeneity in caseworker effectiveness: 10-15 percent of the caseworkers in this dataset are on average significantly more or less effective than the average – or more specifically: the reference category. This result provides evidence for the confirmation of the main research question: that not all caseworkers are equally effective. Specifically, around 9% of the caseworkers has their effectiveness significantly affected by the gender, age or psychological health of the welfare recipient. These are the sole three characteristics tested, and it is therefore likely that other aspects of the welfare recipients' profiles influence the caseworkers' effectiveness as well.

5.3 Limitations

Notwithstanding its contributions, there are some limitations to this study. It would be interesting to link the characteristics of the caseworker to the profiles of the welfare recipients with whom they are more - or less – effective with, to determine whether the similarity theory by Behncke et al. (2010b) is valid for the caseworkers in Rotterdam as well. This research could not include this test in the analysis, however, because there was no information about the caseworkers in the dataset. Another limitation to this dataset is that not all welfare recipients of each caseworker in the dataset are included in the analysis. It may be that caseworkers that appear relatively ineffective, in general or with a specific welfare recipient characteristic, are actually relatively effective with the welfare recipients that are not included in the sample – e.g. some caseworkers may be effective with welfare recipients that have been receiving a welfare benefit for a long time. Including the whole caseloads would be more informative, as outflow of welfare recipients in this sample may be unrepresentative of their overall effectiveness. Additionally, including the unknowns in the assessment variables is a limitation of the study. In this analysis, they have been recoded as neutral to avoid losing data. Including these unknowns, however, may have caused the results to be noisy.

6. CONCLUSION

This research article has provided a step towards improving the effectiveness of caseworkers in Rotterdam in successfully supporting welfare recipients in their reintegration path to paid work, by analyzing data on caseworkers, the welfare recipients in their caseloads and their outflow out of the welfare system. There currently is little agreement among academic researchers concerning the optimal method of reintegration for welfare recipients. The fact that their results often contradict each other, may be due to the use of average treatment effect, rather than distinguishing for the heterogeneity of welfare recipients in their sample. By focusing on average treatment effects, most literature studies forgo the heterogeneity of both caseworker styles and welfare recipient profiles. For instance, a focus on monitoring and toughness in the caseworker style may be very beneficial for some welfare recipients, but detrimental to others. Hence, it is important to consider the different types of welfare recipients when researching caseworker effectiveness. Some literature studies suggest that to reach an optimal allocation of welfare recipients across reintegration programs, their characteristics and profile should be considered. Specifically, these studies found that reemployment rates and the employment duration increase significantly if the caseworker and welfare recipient have similar characteristics (Behncke et al., 2010b), or when the reintegration program are allocated to the individual where it has the highest expected benefit, conditional on the recipients' profile (Carling & Richardson, 2001; Lechner & Smith, 2007; Manski, 2000a; Richardson & van den Berg, 2001).

However, the caseworker's personal style is currently overrepresented in the decision-making of shaping the reintegration path. The chosen reintegration path is more dependent on the profile of caseworker than of the welfare recipient. This tendency may exist because since there is little agreement among academics, and because there is no uniform integration path for each welfare recipients, caseworkers are incentivized to develop their own style. It is likely that this personal style is used – more or less – for all their welfare recipients. Hence, it appears that there is presently too little focus on the welfare recipients' profiles when shaping the reintegration path. Since in the municipality of Rotterdam, the welfare recipients are randomly assigned across the caseworkers, this means that there is a suboptimal allocation, as some caseworkers are more effective with certain types of welfare recipients than others.

The aim of this study was to explore the differences of caseworker effectiveness across welfare recipient characteristics in Rotterdam, in order to improve overall efficiency of welfare recipient reintegration to paid labor. The results of this research show that there are indeed differences in effectiveness among caseworkers: a total of 10-15% of all caseworkers in the sample have an effectiveness rate that is significantly different from the average. Furthermore, the results from this study indicate that that their effectiveness differs across welfare recipient characteristics as well. Specifically, the effectiveness of about 9% percent of the caseworkers included in the sample depends on the welfare recipient's gender, age or psychological health. This finding suggests, for instance, that there are caseworkers in the municipality of Rotterdam that should have mainly females in their caseload, since they are more successful in supporting women to a paid job than men. Optimally allocating welfare

recipients across caseworkers based on their characteristics may thus significantly improve the overall effectiveness of the reintegration system. If the positive change in reemployment rates of Switzerland is representative for Rotterdam, the outflow rate in Rotterdam may almost double if the assignment of welfare recipient is done optimally. The results in this study do not suggest such an increase in reemployment rates, but an analysis that resembles Behncke et al. (2010a)'s study, including data on the caseworkers and more background information on the welfare recipients such as education level, may reveal similar results for the municipality of Rotterdam.

An efficient system of reintegration and reemployment is important to keep the welfare state affordable, and fits in the shift of the Netherlands being a welfare state to a participation society. Taken together the results from this study suggest that the municipality may significantly improve the efficiency of their reintegration system when further exploring the heterogeneity in caseworker effectiveness for the different welfare recipient characteristics.

Further research is necessary, even though the main research question and sub questions can be accepted from the results of this analysis. The acceptation has to be done with caution. Firstly, some of the estimates are relatively small, which suggests that the increase in effectiveness as a result of the optimal welfare recipient allocation is not necessarily large for each caseworker. Secondly, due to several restrictions and limitations of the dataset, it cannot be decidedly concluded which caseworkers should have which type of welfare recipient in their caseload. Rather, it is an indication that the municipality should further explore their caseworker effectiveness.

Lastly, this research has prompted the need for a uniform registration method of welfare recipients' characteristics among caseworkers, in order to facilitate statistical analysis. If the registration method is well understood and carried out organization-wide, this would improve the validity of available data, allowing us to draw more decisive conclusions on the choices of the caseworkers and their optimal caseload. If the dataset is more complete and the conclusions more trustworthy, the municipality may even adapt his hiring process to match the body of welfare recipients currently in the system.

7. References

2Doc: De Tegenprestatie, maandag 19 oktober 2015, 20.25 uur, HUMAN, NPO 2

Behncke, S., Frölich, M., & Lechner, M. (2010a). Unemployed and their caseworkers: should they be friends or foes? Journal Of The Royal Statistical Society. *Series A, Statistics In Society, 173*(1)*,* 67.

Behncke, S., Frölich, M., & Lechner, M. (2010b). A Caseworker Like Me - Does The Similarity Between The Unemployed and Their Caseworkers Increase Job Placements? *The Economic Journal, 120*(549), 1430.

van den Berg, G. J. (1994). The effects of changes of the job offer arrival rate on the duration of unemployment. *Journal of Labor Economics, 12*(3), 478-98.

van den Berg, G., Kjærsgaard, L., and Rosholm, M. (2012). *To Meet or Not to Meet (Your Case Worker)— That is the Question.* IZA Discussion Paper No. 6476

van den Berg, G.J. & Vikstrom, J. (2009)*. Monitoring job offer decisions, punishments, exit to work, and job quality.* IFAU working paper:18

Black, D.A., Smith, J.A., Berger, M.C., and Noel, B.J. (2003). Is the threat of reemployment services more effective than the services themselves? Evidence from random assignment in the UI system. *American Economic Review, 93*, 1313–132

Card, D. & Hyslop, R. (2005). Estimating the effects of a time-limited earnings subsidy for welfare-leavers*. Econometrica, 73*, 1723–1770

Card, D., Kluve, J. and A. Weber (2009): *Active labor market policy evaluations: A Meta-Analysis.* IZA Discussion Paper No 4002

Carling, K. & Richardson, K. (2001), *The relative efficiency of labor market pro- grams: Swedish experience from the 1990s,* IFAU Working Paper 2001:2, Uppsala.

Crepon, B., M. Dejemeppe, and M. Gurgand. *Counseling the Unemployed: Does it Lower Unemployment Duration and Recurrence?* IZA Discussion Paper No. 1796, October 2005.

Dolton, P., & D. O'Neill. (2002). The long-run effects of unemployment monitoring and work-search programs: Experimental evidence from the United Kingdom." *Journal of Labor Economics 20,* 381–403.

European Commission (2012*), Monitoring and follow-up of IAPs and their outcomes in selected EU countries, Brussels*, Author: Regina Konle-Seidl

Fougère, D., J. Pradel, M. Roger, 2009, Does the Public Employment Service affect Search Effort and Outcomes?, *European Economic Review, 53*, 846-869 .

Frolich, M. (2001). *Treatment choice based on parametric evalution methods*. Discussion paper.

Frölich, M., Lechner, M. und S. Behncke (2007): Einfluss der RAV auf die Wiedereingliederung der Stellensuchenden. *SECO Publikationen Arbeitsmarktpolitik, 20*(1)

Gautier, P.A. & van der Klaauw, B. (2009*). Institutions and labor market outcomes in the Netherlands.* Working Paper IFAU – institute for labor market policy evaluation 2009:28

Gemeente Rotterdam (2015a) report. Plan van Aanpak Tegenprestatie (2015-2018), aan de slag voor je uitkering.

Gemeente Rotterdam (2015b) report. Sterker door werk, beleidskader 2015-2018. Werk en Inkomen.

Hainmueller, J., Hofman, B., Krug, G. and K. Wolf (2011): *Do Lower Caseloads Improve the Effectiveness of Active Labor Market Policies? New Evidence from German Employment Offices*. Laser Discussion Papers –Paper No. 52, September 2011

Hellevik, O. (2009). Linear versus logistic regression when the dependent variable is a dichotomy. *Qual Quant, 43*, 43-59

Huber, M., Lechner, M. And Mellace, G. (2014). Why do tougher caseworkers increase employment? The role of programme assignment as a causal mechanism

Kluve, J. (2006): The effectiveness of European active labor market policy. *Labour Economics 17*: 904-918.

Kluve, J., D. Card, M. Fertig, M. Gora, L. Jacobi, P. Jensen, R. Leetmaa, L. Nima, E. Patacchini, S. Schaffner, C. Schmidt, B. Van der Klaauw, and A. Weber. (2007). Active labor market policies in Europe: Performance and perspectives. *Springer Verlag*

Lagerström, J. (2011). *How important are caseworkers : And why? ; new evidence from Swedish employment offices*. Working paper / IFAU - Institute for Labour Market Policy Evaluation, 10

Lalive, R., van Ours, J. and J. Zweimüller (2005): The effect of benefit sanctions on the duration of unemployment. *Journal of the European Economic Association,3(*6), 1386-1417

Lechner, M., & Smith, J. (2007). What is the value added by caseworkers? *Labour Economics, 14*(2), 135-151. doi:10.1016/j.labeco.2004.12.002

Manski, C. (2000a). Identification problems and decisions under ambiguity: empirical analysis of treatment response and normative analysis of treatment choice*. Journal of econometrics, 95,* 415-442

Manski, C. (2000b). *Using studies of treatment response to inform treatment choice in heteregenous populations.* NBER, working paper, 263.

McVicar, D. (2008). Job search monitoring intensity, unemployment exit and job entry: Quasi-experimental evidence from the UK. *Labor Economics 15*, 1451–1468.

OECD Employment Outlook (2007). Chapter 5, Activating the unemployed: What countries do, Paris

Pedersen, J. M., Rosholm, M. and Svarer, M. (2012). *Experimental Evidence on the Effects of Early Meetings and Activation*. IZA Discussion Paper No. 6970, October 2012.

Rosholm, M. & Svarer, M. (2008). The Threat Effect of Active Labour Market Programmes. *Scandinavian Journal of Economics, 110*(2), 385-401

Schütz, H., Kupka, P., Koch, S. and B. Kaltenborn (2011): *Eingliederungs- vereinbarungen in der Praxis. Reformziel noch nicht erreicht*. IAB-Kurzbericht 18/2011

Vikström, J., Rosholm M. and M. Svarer (2011). *The Relative Efficiency of Active Labour Market Policies: Evidence From a Social Experiment and Non-Parametric Methods*, Working Paper 11-04, Aarhus University, March 2011

8. APPENDIX

Table 7: Logistic Regression output. B-coefficients per caseworker (CW) and their standard deviation, *= p<0.10, **= p<0.05, ***= p<0.01

	Model A		Model B		Model C	
Variable	B	St.dev	B	St.dev	B	St.dev
Constant	-2,828***	0,310	-3,409***	0,478	-3,157***	0,511
CW 1	-1,094*	0,593	-0,886	0,605	0,611	0,629
CW 3	0,189	1,081	-0,040	1,118	1,947	1,527
CW 4	1,981***	0,757	1,862**	0,828	1,548	1,209
CW 5	Omitted					
CW 6	0,233	0,558	0,062	0,579	0,672	0,789
CW 7	0,213	0,674	0,168	0,697	0,806	0,899
CW 8	-0,217	1,070	-0,590	1,096	1,030	1,494
CW 9	0,326	0,559	-0,068	0,578	1,078	0,736
CW 10	Omitted					
CW 11	-1,392	1,054	-1,639	1,070	-0,046	1,479
CW 12	0,137	0,603	0,151	0,622	0,112	1,144
CW 13	0,386	0,527	0,189	0,544	1,270*	0,701
CW 14	Omitted					
CW 15	0,430	1,090	0,005	1,116	1,211	1,185
CW 16	Omitted					
CW 17	-0,044	0,670	-0,267	0,686	-0,210	1,138
CW 18	-1,516	1,053	-1,894*	1,066	-0,532	1,134
CW 19	0,004	0,522	-0,235	0,539	0,759	0,730
CW 20	0,982*	0,538	0,410	0,572	1,260	0,802
CW 21	-0,217	0,598	-0,483	0,613	0,567	0,787
CW 22	-1,554	1,053	-1,713*	1,063	-0,507	1,134
CW 23	-0,539	0,664	-0,893	0,680	0,645	0,788
CW 24	0,360	0,560	-0,092	0,579	1,285*	0,741
CW 25	1,036	0,824	0,608	0,892	1,771**	0,941
CW 26	-0,933	1,058	-1,158	1,070	0,066	1,143
CW 27	Omitted					
CW 28	-0,308	1,068	-1,084	1,097	0,966	1,492
CW 29	0,371	0,677	-0,225	0,720	0,960	1,171
CW 30	0,386	0,607	0,152	0,633	1,142	0,910
CW 31	-0,573	0,783	-0,773	0,797	0,631	0,895
CW 32	0,400	0,527	-0,041	0,554	0,631	0,895
CW 33	0,525	1,094	0,254	1,138	1,211	1,185
CW 34	-0,522	0,783	-0,795	0,798	-0,101	1,140
CW 35	1,324	0,841	0,821	0,884	2,464**	1,327
CW 36	-1,516	1,053	-1,810*	1,064	-0,174	1,478
CW 37	0,367	0,501	0,006	0,523	1,017	0,735

CW 38	0,404	0,502	-0,005	0,523	0,043	0,885
CW 39	-0,063	1,073	-0,172	1,087	1,078	1,177
CW 40	Omitted					
CW 41	0,563	0,484	0,401	0,503	1,109	0,737
CW 42	0,400	0,678	-0,193	0,717	0,449	1,152
CW 43	0,009	0,601	-0,250	0,618	0,854	0,792
CW 44	-0,063	0,669	-0,484	0,687	-0,175	1,139
CW 45	-0,669	0,782	-1,004	0,808	0,416	0,890
CW 46	0,492	0,528	0,271	0,554	0,518	0,892
CW 47	0,055	1,076	-0,066	1,097	1,947	1,527
CW 48	Omitted					
CW 49	-1,043	1,057	-1,267	1,067	0,371	1,483
CW 50	Omitted					
CW 51	Omitted					
CW 52	Omitted					
CW 53	-0,278	0,667	-0,332	0,684	0,592	0,894
CW 54	Omitted					
CW 55	Omitted					
CW 56	-0,034	0,790	-0,258	0,808	1,017	0,905
CW 57	Omitted					
CW 58	0,724	0,566	0,209	0,627	1,599**	0,751
CW 59	Omitted					
CW 60	0,035	0,671	-0,203	0,692	0,631	0,895
CW 61	0,120	0,556	-0,291	0,583	0,988	0,734
CW 62	0,443	0,502	0,113	0,524	0,932	0,733
CW 63	0,071	0,602	-0,165	0,622	-0,175	1,139
CW 64	1,186**	0,543	0,687	0,581	2,058***	0,840
CW 65	-0,504	0,664	-0,959	0,683	0,925	1,232
CW 66	-0,278	0,667	-0,590	0,685	-0,309	1,137
CW 67	0,225	0,525	0,096	0,548	0,267	0,888
CW 68	Omitted					
CW 69	1,218	0,834	1,254	0,895	1,548	1,209
CW 70	-0,168	1,071	-0,638	1,097	1,030	1,494
CW 71	0,024	0,601	-0,268	0,620	0,518	0,892
CW 72	0,486	0,562	0,515	0,582	1,617**	0,816
CW 73	-0,263	0,787	-0,502	0,804	1,598	1,313
CW 74	Omitted					
CW 75	Omitted					
CW 76	Omitted					
CW 77	-0,522	0,783	-0,740	0,797	0,022	1,142
CW 78	0,207	0,604	-0,106	0,626	-0,309	1,137
CW 79	-0,699	1,061	-1,400	1,082	0,267	1,147
CW 80	0,525	1,094	0,342	1,146	2,058*	1,263
CW 81	-0,217	0,667	-0,274	0,682	0,631	0,895

CW 82	*Omitted*					
CW 83	-0,910	1,058	-1,483	1,078	-0,244	1,138
CW 84	-0,217	0,598	-0,454	0,618	-0,481	1,134
CW 85	0,302	0,605	0,129	0,625	0,790	0,791
CW 86	0,505	0,562	0,180	0,583	0,449	0,891
CW 87	-0,025	0,670	-0,318	0,686	0,806	0,899
CW 88	0,467	0,561	0,319	0,582	1,588**	0,709
CW 89	-0,076	0,600	-0,491	0,627	-0,309	1,137
CW 90	-0,263	1,069	-0,259	1,090	1,436	1,505
CW 91	0,225	0,525	-0,237	0,545	1,005	0,696
CW 92	-0,308	0,666	-0,542	0,681	0,759	0,790
CW 93	*Omitted*					
CW 94	0,310	0,559	-0,088	0,587	0,988	0,734
CW 95	-0,117	1,072	-0,738	1,087	0,759	1,163
CW 96	-0,504	0,664	-0,836	0,680	0,267	0,888
CW 97	0,120	0,672	-0,292	0,699	0,672	0,896
CW 98	-0,286	0,786	-0,540	0,807	0,066	1,143
CW 99	-1,807*	1,052	-1,865*	1,062	-0,604	1,133
CW 100	-0,669	0,782	-1,031	0,797	0,935	1,302
CW 101	0,040	0,601	-0,143	0,619	0,923	0,794
CW 102	0,394	0,560	0,157	0,580	0,998	0,795
CW 103	-0,076	0,600	-0,779	0,622	0,830	0,731
CW 104	*Omitted*					
CW 105	-0,217	1,070	-0,222	1,090	1,078	1,177
CW 106	-1,347	1,054	-1,626	1,063	0,406	1,483
Female			-0,493***	0,157	-0,581	0,951
Age			-0,007	0,007		
Industry of desired job						
Care			0,254	0,246	0,284	0,263
Social			0,131	0,329	0,166	0,354
Cleaning			-0,030	0,244	0,016	0,260
Transport			0,473***	0,192	0,489**	0,212
Agricultural			0,094	0,454	0,052	0,518
Construction			0,696***	0,263	0,694***	0,296
Industrial Engineering			0,005	0,275	0,032	0,302
Industrial Cleaning			0,509	0,582	0,502	0,630
Hospitality			0,226	0,261	0,204	0,282
Retail & Wholesale			0,130	0,233	0,131	0,253
Security			-0,086	0,498	-0,139	0,529
IT			-0,313	0,635	-0,799	0,786
Call center			0,798**	0,381	0,785**	0,429
Administrative			0,394*	0,243	0,538	0,264

Educational		0,995**	0,494	0,653**	0,542
Recreational		-0,394	1,078	-0,393	1,152
Assessment variables					
Motivation		0,318***	0,098	0,366**	0,103
Flexibility		0,187***	0,076	0,217*	0,083
Persistence		0,072	0,068	0,077	0,074
Independence		0,116	0,079	0,070	0,084
Initiative		-0,152**	0,070	-0,196*	0,077
Communication		-0,112	0,095	-0,169	0,106
Representativeness		0,009	0,089	0,076	0,098
Personal care		-0,042	0,095	-0,072	0,104
Attitude		-0,025	0,091	-0,031	0,098
Concerns for employability					
Financial distress		0,263**	0,137	0,288**	0,148
Motivation		-0,272	0,762	-0,198	0,813
Representativeness		0,389	0,646	0,378	0,691
Living situation		-0,472	0,314	-0,667	0,338
Duty of care		-0,906	0,729	-0,960	0,770
Language		-0,520**	0,265	-0,444*	0,295
Incapacitation		0,655	0,775	0,767	0,817
Physical limitations		0,309**	0,141	0,430*	0,152
Psychological limitations		0,273*	0,161	0,223	0,174
Addiction		0,352	0,417	0,268	0,451
Following education		_omitted_			
Pregnancy leave		omitted			
Social isolation		-0,042	0,631	0,339	0,659
Child care		0,165	0,266	0,129	0,287
Criminal record		-0,683*	0,387	-0,603*	0,409
Lack of computer skills		-0,601	0,438	-0,665	0,456
Additional aid					
Housing		-0,185	0,911	-0,360	0,978
Income		-0,877	1,473	-0,961	1,634
Health Insurance		1,066	1,196	1,232	1,303
Daycare		0,340	0,808	0,381	0,869
Pseudo R²	0,038	0,102		0,139	

Tabel 8: Logistic regression output of interaction effects in Model C. B-coefficients per caseworker (CW) and their standard deviation. Empty cells mean that the interaction effect is ommitted due to collinearity *= p<0.10, **= p<0.05, ***= p<0.01

#CW	Female		Age		Psychological limitations	
	B-coefficient	St.dev	B-coefficient	St.dev	B-coefficient	St.dev
1						
2	-0,205	1,176	-0,026	0,057		
3			-0,127	0,286		
4	2,191	1,762	0,034	0,129	-1,411	1,858
5						
6	0,325	1,341	-0,023	0,074	0,760	1,507
7	-0,063	1,582	0,018	0,079		
8			-0,357	0,586		
9	-0,706	1,490	-0,005	0,066	-0,409	1,650
10						
11			0,030	0,113		
12	1,087	1,520	0,117	0,079		
13	-1,115**	1,470	0,100	0,066	-0,377	1,636
14						
15			-0,176	0,258		
16						
17	1,464	1,575	0,158*	0,096		
18			0,080	0,112		
19	-0,371	1,302	-0,002	0,065	-0,293	1,626
20	0,687	1,295	-0,094	0,091	0,526	1,638
21	-0,613	1,512	0,025	0,070		
22			0,021	0,116		
23			0,001	0,073		

#						
24	-1,043	1,491	-0,015	0,073	1,449**	1,521
25			-0,083	0,111		
26			0,249	0,203		
27						
28			0,246	0,178		
29	0,214	1,598	0,016	0,099	-0,798	1,737
30	-0,145	1,415	0,100	0,073	0,030	1,689
31			0,061	0,088	1,767	1,885
32	0,732	1,310	-0,045*	0,071	-0,176	1,480
33			-0,154	0,185		
34	0,405	1,725	0,169	0,107		
35	-0,671	1,883	0,067	0,085		
36			0,003	0,114		
37			0,050	0,062		
38	-0,051	1,240	-0,016	0,063	1,309	1,426
39	1,778	1,287	-0,375	0,427		
40						
41			0,052	0,061	0,831*	1,394
42	0,187	1,207	0,125	0,094		
43	1,038	1,589	0,034	0,068	0,335	1,682
44	-0,727	1,516	0,068	0,079		
45	1,349	1,574	0,003	0,096	1,293	1,867
46			-0,135	0,095	-0,130	1,646
47	1,080	1,311	-0,129	0,182		
48						
49			0,146	0,137		
50						
51						

52						
53			0,074	0,077		
54	-0,567	1,571				
55						
56			0,057	0,097		
57						
58			-0,007	0,080		
59						
60	-0,952	1,501	0,027	0,076	0,003	1,726
61			0,028	0,068		
62	-0,071	1,577	-0,009	0,068	1,634***	1,434
63	-0,938	1,486	0,002	0,077		
64	0,241	1,241	0,054	0,065	-0,479	1,505
65	1,457	1,517	-0,005	0,089	2,384**	1,730
66	-0,312	1,314	-0,069	0,110	1,265	1,716
67			-0,045	0,074		
68	1,185	1,570				
69	1,051	1,305	0,066	0,126		
70			0,051	0,113		
71	0,581	1,818	-0,113	0,099		
72			0,042	0,065	-0,252	1,659
73	0,276	1,402	-0,027	0,102		
74	-0,823	1,355				
75						
76						
77			-0,136	0,176		
78			0,009	0,072	0,397	1,692
79	0,190	1,725	0,047	0,136	0,942	1,562

80	2,010**	1,521	-0,092	0,218		
81			0,054	0,077	0,576	1,525
82						
83	-0,531	1,572	-0,070	0,124		
84			0,051	0,068	0,201	1,676
85			-0,050	0,076		
86	1,489	1,512	0,026	0,068	-0,189	1,635
87	0,058	1,525	0,024	0,083		
88	1,343**	1,348	-0,046	0,074		
89	-0,501	1,576	-0,028	0,077		
90			0,022	0,121		
91	1,432	1,514	0,078	0,063	0,770	1,724
92			0,083	0,072	0,005	1,728
93	-0,904	1,468				
94			-0,028	0,073		
95	-0,545	1,490	0,129	0,152	1,074	1,863
96			0,002	0,083		
97	-0,399	1,566	0,042	0,072		
98	0,022	1,579	-0,036	0,097	-0,258	1,667
99	0,537	1,730	2,627	829,110	0,942	1,562
100			0,082	0,092		
101			0,025	0,073	0,576	1,525
102	-0,796	1,517	0,041	0,066		
103			0,001	0,071		
104						
105			0,036	0,124		
106			0,074	0,114		

*Table 9: Caseworker B-coefficients and their standard deviations. CW stands for Caseworker. Reference category = Caseworker 2. *= p<0.10, **= p<0.05, ***= p<0.01*

	Model A		Model B		Model C	
Variable	B-coefficient	St. dev	B-coefficient	St. dev	B-coefficient	St. dev
CW1	-0,036*	0,021	-0,026	0,021	-0,028	0,021
CW3	0,011	0,058	0,005	0,058	0,009	0,058
CW4	0,244***	0,070	0,229***	0,070	0,242***	0,070
CW5	-0,056	0,040	-0,063	0,040	-0,055	0,040
CW6	0,014	0,030	0,007	0,030	0,014	0,030
CW7	0,012	0,036	0,008	0,036	0,015	0,036
CW8	-0,010	0,048	-0,024	0,048	-0,002	0,048
CW9	0,020	0,031	0,003	0,031	0,017	0,031
CW10	-0,056	0,058	-0,081	0,058	-0,068	0,058
CW11	-0,041	0,030	-0,050*	0,030	-0,045	0,030
CW12	0,008	0,031	0,008	0,031	0,015	0,031
CW13	0,024	0,029	0,014	0,029	0,020	0,029
CW14	-0,056	0,058	-0,067	0,058	-0,051	0,058
CW15	0,027	0,064	0,009	0,064	0,016	0,064
CW16	-0,056	0,062	-0,078	0,062	-0,068	0,062
CW17	-0,002	0,033	-0,012	0,033	-0,003	0,033
CW18	-0,043	0,029	-0,056**	0,029	-0,047*	0,029
CW19	0,000	0,026	-0,009	0,026	0,000	0,026
CW20	0,081**	0,036	0,050	0,036	0,064*	0,036
CW21	-0,010	0,028	-0,021	0,028	-0,009	0,028
CW22	-0,043	0,028	-0,048*	0,028	-0,044	0,028
CW23	-0,023	0,027	-0,034	0,027	-0,025	0,027
CW24	0,022	0,031	0,002	0,031	0,011	0,031
CW25	0,087	0,060	0,070	0,059	0,070	0,060
CW26	-0,033	0,036	-0,042	0,036	-0,031	0,036
CW27	-0,056	0,064	-0,071	0,064	-0,050	0,064
CW28	-0,014	0,047	-0,052	0,047	-0,040	0,047
CW29	0,023	0,038	0,001	0,038	0,016	0,038
CW30	0,024	0,034	0,017	0,034	0,023	0,034
CW31	-0,024	0,031	-0,031	0,031	-0,023	0,031
CW32	0,025	0,029	0,007	0,030	0,015	0,030
CW33	0,035	0,067	0,024	0,067	0,031	0,067
CW34	-0,022	0,032	-0,035	0,032	-0,027	0,032
CW35	0,126**	0,067	0,098	0,067	0,110*	0,067
CW36	-0,043	0,029	-0,056**	0,029	-0,044	0,029
CW37	0,023	0,028	0,009	0,028	0,022	0,028
CW38	0,026	0,028	0,010	0,028	0,024	0,028
CW39	-0,003	0,052	-0,011	0,051	-0,004	0,052
CW40	-0,056	0,049	-0,065	0,050	-0,049	0,050
CW41	0,038	0,028	0,031	0,028	0,041	0,028

CW42	0,025	0,039	-0,003	0,039	0,012	0,039
CW43	0,001	0,030	-0,010	0,030	0,003	0,030
CW44	-0,003	0,032	-0,020	0,032	-0,009	0,032
CW45	-0,026	0,030	-0,038	0,030	-0,031	0,030
CW46	0,032	0,030	0,023	0,030	0,031	0,030
CW47	0,003	0,054	-0,005	0,054	0,001	0,054
CW48	-0,056	0,040	-0,084**	0,040	-0,071*	0,040
CW49	-0,035	0,034	-0,049	0,034	-0,040	0,034
CW50	-0,056*	0,030	-0,064**	0,031	-0,057*	0,031
CW51	-0,056*	0,034	-0,056*	0,034	-0,048	0,034
CW52	-0,056	0,054	-0,070	0,055	-0,056	0,055
CW53	-0,013	0,030	-0,014	0,030	-0,006	0,030
CW54	-0,056	0,035	-0,076**	0,035	-0,061*	0,035
CW55	-0,056*	0,030	-0,063**	0,030	-0,058*	0,030
CW56	-0,002	0,039	-0,012	0,039	0,002	0,039
CW57	-0,056	0,070	-0,084	0,070	-0,063	0,070
CW58	0,053	0,035	0,032	0,036	0,042	0,036
CW59	-0,056**	0,026	-0,067***	0,026	-0,060**	0,026
CW60	0,002	0,034	-0,008	0,034	-0,002	0,034
CW61	0,007	0,029	-0,006	0,029	0,003	0,029
CW62	0,028	0,028	0,015	0,028	0,021	0,028
CW63	0,004	0,030	-0,007	0,031	0,003	0,031
CW64	0,106**	0,039	0,083**	0,039	0,097***	0,039
CW65	-0,021	0,028	-0,039	0,028	-0,030	0,028
CW66	-0,013	0,030	-0,028	0,030	-0,018	0,030
CW67	0,013	0,028	0,010	0,028	0,018	0,028
CW68	-0,056	0,070	-0,070	0,070	-0,067	0,070
CW69	0,111*	0,064	0,112*	0,064	0,113*	0,064
CW70	-0,008	0,049	-0,027	0,050	-0,020	0,050
CW71	0,001	0,030	-0,011	0,030	0,003	0,030
CW72	0,032	0,032	0,030	0,032	0,033	0,032
CW73	-0,012	0,035	-0,021	0,035	-0,012	0,035
CW74	-0,056	0,045	-0,039	0,045	-0,045	0,045
CW75	-0,056	0,048	-0,050	0,048	-0,045	0,048
CW76	-0,056	0,070	-0,088	0,070	-0,064	0,070
CW77	-0,022	0,032	-0,032	0,032	-0,023	0,032
CW78	0,012	0,032	-0,001	0,032	0,008	0,032
CW79	-0,027	0,040	-0,057	0,040	-0,043	0,040
CW80	0,035*	0,067	0,029	0,066	0,034	0,067
CW81	-0,010	0,031	-0,013	0,031	-0,007	0,031
CW82	-0,056	0,034	-0,076**	0,034	-0,068**	0,034
CW83	-0,033	0,036	-0,052	0,036	-0,041	0,036
CW84	-0,010	0,028	-0,018	0,028	-0,010	0,028
CW85	0,018	0,033	0,009	0,033	0,018	0,033

CW86	0,033	0,033	0,020	0,033	0,031	0,033
CW87	-0,001	0,033	-0,016	0,033	-0,005	0,033
CW88	0,030	0,032	0,023	0,032	0,033	0,032
CW89	-0,004	0,029	-0,020	0,029	-0,011	0,029
CW90	-0,012	0,048	-0,013	0,047	-0,007	0,047
CW91	0,013	0,028	-0,007	0,028	0,003	0,028
CW92	-0,014	0,030	-0,025	0,030	-0,016	0,030
CW93	-0,056	0,044	-0,055	0,044	-0,051	0,044
CW94	0,019	0,030	0,002	0,031	0,014	0,030
CW95	-0,006	0,051	-0,037	0,050	-0,021	0,050
CW96	-0,021	0,028	-0,036	0,028	-0,027	0,028
CW97	0,007	0,035	-0,010	0,035	0,003	0,035
CW98	-0,013	0,035	-0,021	0,035	-0,015	0,035
CW99	-0,046*	0,026	-0,047*	0,026	-0,042*	0,026
CW100	-0,026	0,030	-0,041	0,030	-0,026	0,030
CW101	0,002	0,030	-0,005	0,030	0,004	0,030
CW102	0,025	0,031	0,014	0,031	0,023	0,031
CW103	-0,004	0,029	-0,038	0,029	-0,024	0,029
CW104	-0,056	0,062	-0,079	0,062	-0,062	0,062
CW105	-0,010	0,048	-0,010	0,048	-0,007	0,048
CW106	-0,041	0,031	-0,054*	0,031	-0,047	0,031

Table 10: Regression output of interaction effects in Model C. B-coefficients per caseworker (CW) and their standard deviation, *= p<0.10, **= p<0.05, ***= p<0.01

#CW	Female B-coefficient	St.dev	Age B-coefficient	St.dev	Psychological limitations B-coefficient	St.dev
1	-0,065	0,064	*Omitted*		0,016	0,077
2	-0,066	0,064	-0,002	0,002	-0,060	0,081
3	0,127	0,126	-0,013	0,015	0,140	0,131
4	0,382**	0,198	0,018	0,016	0,063	0,202
5	-0,020	0,095	0,000	0,004	0,014	0,117
6	-0,071	0,077	-0,002	0,003	0,104	0,086
7	-0,071	0,091	-0,001	0,004	-0,029	0,124
8	-0,027	0,120	-0,003	0,005	0,320**	0,155
9	-0,106	0,077	-0,002	0,003	0,024	0,094
10	-0,040	0,126	0,000	0,006	0,021	0,145
11	-0,010	0,079	0,001	0,003	0,103	0,096
12	0,046	0,083	0,007**	0,003	-0,069	0,094
13	-0,145**	0,076	0,007**	0,003	0,029	0,097
14	-0,037	0,129	0,000	0,007	-0,015	0,243
15	-0,014	0,277	-0,001	0,019	0,245	0,322
16	0,037	0,179	0,001	0,009	-0,008	0,140
17	0,048	0,081	0,008**	0,004	-0,072	0,122
18	-0,044	0,075	0,000	0,003	0,011	0,090
19	-0,076	0,071	-0,001	0,003	0,018	0,089
20	-0,004	0,086	-0,009**	0,004	0,075	0,096
21	-0,064	0,072	0,001	0,003	-0,024	0,104
22	-0,060	0,075	-0,001	0,003	0,073	0,086
23	-0,110	0,073	-0,001	0,003	-0,039	0,085
24	-0,134*	0,080	-0,004	0,003	0,196**	0,093

25	-0,266*	0,144	-0,012	0,008	-0,113	0,161
26	-0,054	0,087	0,003	0,004	0,000	0,122
27	-0,039	0,153	0,000	0,008	0,042	0,169
28	-0,019	0,114	0,011*	0,006	0,045	0,123
29	-0,071	0,097	0,000	0,005	-0,026	0,104
30	-0,089	0,086	0,007*	0,004	0,101	0,105
31	-0,089	0,079	0,001	0,003	0,148	0,109
32	-0,005	0,077	-0,004	0,003	0,030	0,087
33	-0,690***	0,220	-0,036***	0,011	-0,215	0,152
34	-0,022	0,079	0,006*	0,003	0,184*	0,096
35	-0,127	0,173	0,007	0,007	-0,260	0,163
36	-0,010	0,076	0,000	0,003	0,000	0,087
37	-0,051	0,074	0,003	0,003	-0,080	0,087
38	0,037	0,073	-0,003	0,003	0,164*	0,087
39	-0,144	0,114	-0,006	0,006	-0,015	0,132
40	-0,016	0,110	-0,001	0,005	0,014	0,132
41	-0,032	0,075	0,003	0,003	0,131	0,086
42	0,008	0,091	0,008	0,005	0,170*	0,099
43	-0,101	0,076	0,001	0,003	0,080	0,099
44	0,017	0,081	0,002	0,003	-0,057	0,106
45	-0,081	0,077	-0,001	0,003	0,085	0,098
46	-0,002	0,077	-0,008***	0,003	0,024	0,101
47	0,055	0,129	-0,003	0,006	0,115	0,137
48	-0,023	0,097	0,000	0,006	0,001	0,119
49	0,042	0,089	0,005	0,004	-0,011	0,104
50	-0,030	0,116	0,000	0,003	0,025	0,098
51	-0,027	0,083	0,000	0,003	0,002	0,100
52	-0,028	0,123	0,000	0,007	0,044	0,131

53	-0,072	0,077	0,002	0,003	-0,024	0,096
54	-0,030	0,094	0,000	0,004	0,012	0,109
55	-0,020	0,078	0,001	0,003	0,012	0,109
56	-0,142	0,090	0,002	0,005	-0,003	0,118
57	0,000	0,149	0,000	0,009	0,043	0,178
58	-0,228***	0,087	-0,003	0,005	0,211**	0,108
59	-0,035	0,070	0,000	0,002	0,006	0,088
60	-0,073	0,083	0,000	0,003	0,032	0,097
61	-0,078	0,076	0,000	0,003	-0,040	0,094
62	-0,046	0,073	-0,004	0,003	0,242***	0,091
63	0,017	0,078	-0,001	0,003	-0,050	0,101
64	-0,136	0,096	0,005	0,004	0,020	0,101
65	0,013	0,074	-0,001	0,003	0,200**	0,097
66	-0,047	0,081	-0,003	0,003	0,095	0,088
67	0,001	0,073	-0,002	0,003	-0,065	0,089
68	-0,013	0,193	0,000	0,010	0,010	0,188
69	0,029	0,150	0,006	0,012	-0,153	0,250
70	0,092	0,127	0,004	0,005	0,105	0,129
71	-0,027	0,077	-0,005*	0,003	-0,098	0,106
72	-0,153*	0,084	0,002	0,003	0,033	0,101
73	0,082	0,085	-0,001	0,004	-0,030	0,110
74	-0,024	0,102	0,001	0,004	0,013	0,129
75	-0,005	0,120	0,001	0,005	0,030	0,149
76	-0,013	0,174	0,000	0,010	-0,002	0,196
77	-0,032	0,082	-0,002	0,004	-0,007	0,092
78	0,076	0,081	0,001	0,003	0,101	0,105
79	-0,067	0,093	-0,001	0,005	-0,098	0,112
80	-0,391***	0,159	-0,011	0,010	-0,447*	0,262

81	-0,075	0,078	0,000	0,003	-0,051	0,093
82	-0,033**	0,083	0,000	0,003	0,016	0,094
83	-0,029	0,095	-0,003	0,004	0,073	0,098
84	0,001	0,074	0,000	0,003	0,083	0,089
85	-0,052	0,083	-0,004	0,003	-0,072	0,103
86	0,053	0,081	0,001	0,003	0,105	0,097
87	-0,091	0,082	-0,001	0,004	-0,052	0,101
88	-0,189	0,080	-0,003	0,003	-0,037	0,131
89	0,014	0,076	-0,001	0,003	0,068	0,095
90	0,103	0,114	0,000	0,005	-0,120	0,131
91	-0,086	0,073	0,003	0,003	0,018	0,094
92	-0,094	0,077	0,001	0,003	-0,030	0,090
93	-0,032	0,113	0,000	0,005	0,005	0,131
94	-0,090	0,077	-0,002	0,003	-0,091	0,099
95	-0,089	0,114	0,007	0,006	-0,131	0,142
96	-0,037	0,073	0,000	0,003	0,059	0,094
97	-0,058	0,085	0,001	0,003	0,028	0,098
98	-0,029	0,084	-0,002	0,004	-0,039	0,098
99	-0,042	0,071	0,001	0,002	0,002	0,082
100	0,028	0,078	0,003	0,003	0,089	0,095
101	-0,083	0,077	0,001	0,003	-0,042	0,098
102	-0,048	0,080	0,001	0,003	-0,068	0,103
103	-0,122*	0,076	-0,001	0,003	0,019	0,089
104	-0,030	0,159	-0,002	0,008	0,039	0,163
105	-0,154	0,110	0,001	0,006	0,303**	0,138
106	*Omitted*		0,001	0,003	*Omitted*	